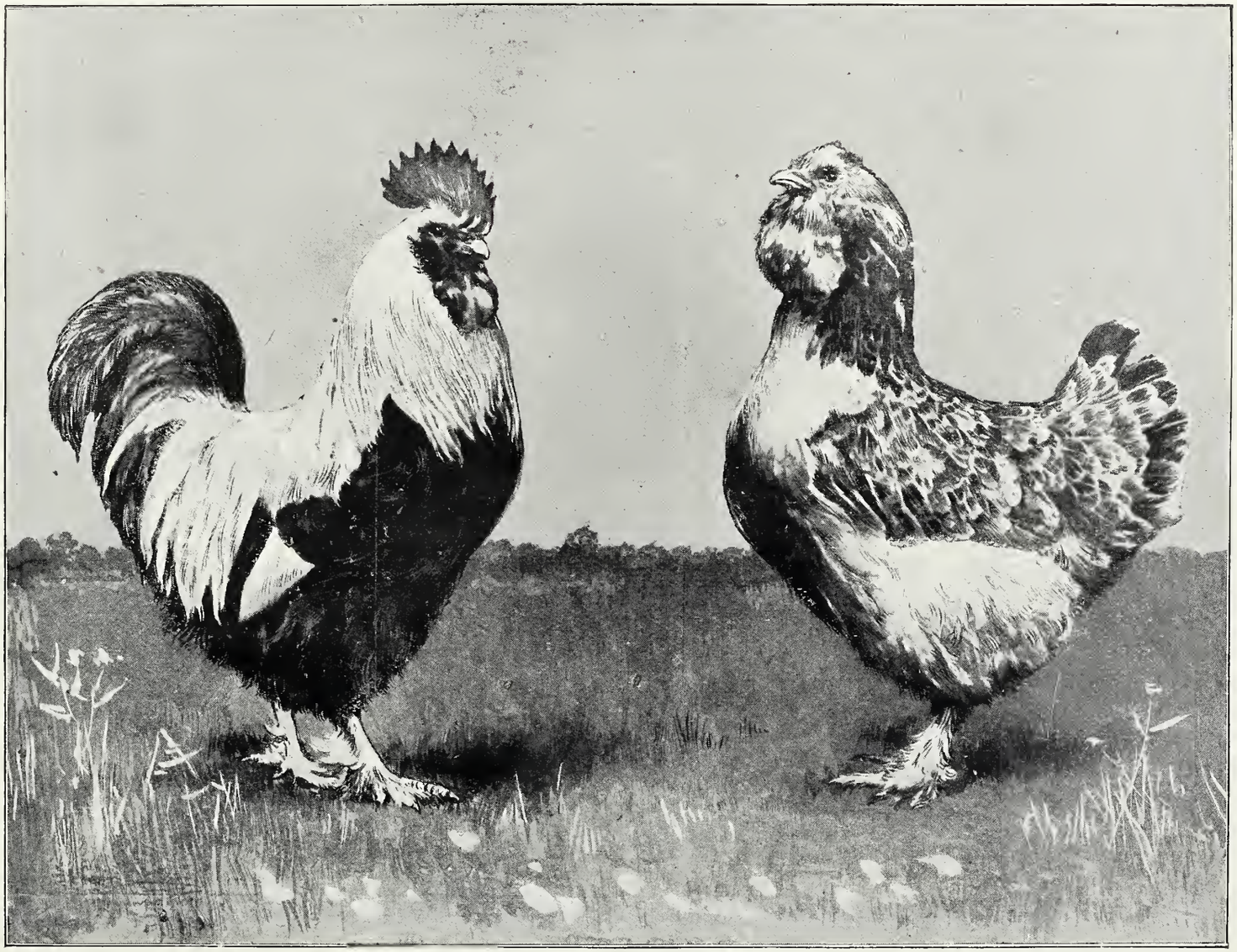
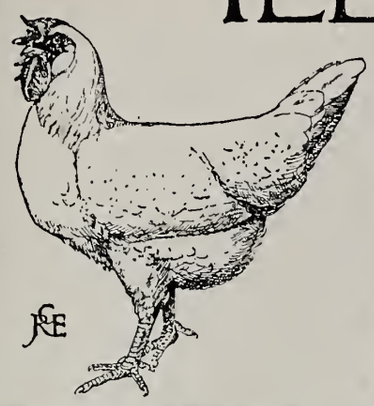


A PAIR OF FAVEROLLES.

THE ILLUSTRATED POULTRY RECORD



VOL. IV.—No. 7. April 1, 1912. Monthly Sixpence Net.

DIARY OF THE MONTH.

EDITORIAL NOTICES.

Telegrams: "VIVACIDAD." Telephone: CITY, 2083.
ENTERED AT STATIONERS' HALL.

The Editor will be glad to consider any MSS., photographs, or sketches submitted to him, but they should be accompanied by stamped addressed envelopes for return if unsuitable. In case of loss or injury he cannot hold himself responsible for MSS., photographs, or sketches, and publication in the ILLUSTRATED POULTRY RECORD *can alone be taken as evidence of acceptance. The name and address of the owner should be placed on the back of all pictures and MSS. All rights of reproduction and translation are reserved.*

The Editor will be glad to hear from readers on any Poultry Topics, and all Queries addressed to the paper will be answered by experts in the several departments. The desire is to help those who are in difficulty regarding the management of their poultry, and accordingly no charge for answering such queries is made.

The Annual subscription to the ILLUSTRATED POULTRY RECORD *at home and abroad is 8s., including postage, except to Canada, in which case it is 7s. Cheques and P.O.O.'s should be made payable to the* ILLUSTRATED POULTRY RECORD.

The ILLUSTRATED POULTRY RECORD *is published on the first of every month. Should readers experience any difficulty in securing their copies promptly they are requested to communicate immediately with the Editor. The latest date for receiving advertisements is the 20th of the month preceding date of issue.*

The utmost care is exercised to exclude all advertisements of a doubtful character. If any reader has substantial grounds for complaint against an advertiser he is requested to communicate at once with the ***Editor.***

Poultry Instructors and Investigators.

We publish on another page announcement as to the steps which are being taken for the establishment of an International Association of Poultry Instructors and Investigators and that the first meeting of the Provisional Committee will be held in London next July. That such a society may render great service by bringing those engaged in this class of work into closer relationship, by enlarging their outlook and enhancing their status, is evident. The remarkable progress made over the entire world, due to the fact that poultry appeal to, and are within the opportunities of a larger number of people than any other branch of agriculture, emphasises the necessity for more systematic and scientific methods. For that reason, if there were no other, it is of essential importance, in order that teaching and research work shall attain a measure of uniformity, allowing for the special conditions of each country, that those who are thus engaged shall have at command the experience of others. Already a large amount of data is available, but there is no uniform method of bringing it before those engaged in teaching or experimental work. And it may be assumed that, as public authorities in all countries realise the important part which the poultry industry must play in future developments, the need for unity of effort will be much greater. As we have recorded from time to time, an association has been actively engaged in America, where it has rendered important service. At the last two annual meetings the question of forming a more comprehensive

body was ventilated, and at Orono in August, 1911, it was decided to carry the project forward, provided the necessary support was given in other countries. An expression was then given that the first leader of such International Association should be Mr. Edward Brown, F.L.S., and it was such invitation, afterwards supported by the earlier members of the Provisional Committee, which induced him to accede to the invitation. We feel sure that British poultry-breeders will rejoice at the first president being selected from their number. In Dr. Raymond Pearl, as Honorary Secretary, we hope not *pro tem.*, the association has one who is rendering invaluable service by his scientific investigations at Orono, Maine. A goodly number of countries are already represented on the committee, and we hope there will be a large attendance in July next, to whom British poultrymen will give a warm welcome.

A Scottish Poultry Superintendent.

The New Scottish Board of Agriculture has signalised itself by the appointment of a poultry superintendent as one of its first batch of officials, which is at once an indication of the fact that poultry is coming to its own in Scotland and that the Board intends to press forward the work which it has so well begun. In this respect Scotland is in advance of all other sections of the United Kingdom. The English Board has never had a recognised poultry department or expert, and even in Ireland, although there are officials specially engaged for poultry work, they do not hold the position which the Scottish Board has made. Perhaps these two departments may now come into line. The name associated with this office is one which everyone anticipated—namely, Mr. A. M. Prain, to whom we offer our warmest congratulations and good wishes. Mr. Prain has been associated with poultry for many years and has done much to promote its extension in Scotland. In June, 1909 (Vol. I., No. 9. page 550), we gave a brief notice of his work and portrait, as a member of the Departmental Committee on Poultry-Breeding in Scotland. Since that time he has visited Canada and Australia, so that he has had an opportunity of seeing what is being done in those great Colonies. Mr. Prain is in the prime of life, and a combination of past experience with future opportunities should enable him to make poultry production in Scotland a great part of the national food supply. His keen interest in this branch, and the fact that he is a practical agriculturist, are of supreme importance.

Ducks and Animal Parasites.

That the relationships of various animals in respect to their parasites is a question of which little or nothing is known is generally recognised, and that investigation might reveal much that is now hidden is equally true. In some instances it may well be that the effect of the presence of life parasitic to one species may be harmful to others, but it is probably equally true that the effect may in many cases be beneficial. We are led to these observations by an article in an American scientific journal, in which it is recorded that in seeking for means of preventing parasitic diseases, it was found on two ranches that where ducks were systematically run, the calves remained perfectly healthy and the sheep were free from lungworms. In view of the somewhat alarming statements made a year or two ago as to the increase of disease among stock as a result of poultry being run on the same ground, the above is very suggestive. We have always felt that whilst negligence and overcrowding provide the conditions which induce disease, and that as a result this may be communicated to other animals, perhaps also to human beings, where proper methods are adopted, fowls living as they do so largely upon the lower forms of life, the benefit of poultry upon crops is very great. That has been within the experience of many poultry-keepers, although the evidence may not have been so clear as that stated above. This question is one which deserves extended and exhaustive investigation.

Relation of the Comb to Egg Organs.

That the combs of fowls increase in size as the breeding or laying season approaches is within the experience of every poultry-keeper. Hitherto no adequate explanation of the cause has been forthcoming, although such knowledge would be very valuable. Mr. Geoffrey Smith, writing in the "Quarterly Journal of Microscopical Science," shows that the comb increases practically to double the size or more during the period of laying, without an increase in the weight of the body of the hen. It is suggested that the growth of the comb at this period is due to a fatty infiltration of the tissue of that organ, and that during the time of laying the blood is charged with fatty substances which accumulate in the ovary, where they enter into the composition of the yoke of the egg. Any access of these substances is deposited in the comb. Such is probably the process, but does not completely explain the co-relation between the two organs nor yet the same comb enlargement in the male. The subject is one for more exhaustive research.

The Value of Feather Colour.

Fashion has more to do with the feather coloration of fowls than anything else, so far as exhibition stock is concerned. There are as many

vagaries in this direction as in that of ladies' bonnets, and, apparently, with no more appreciable reason for such changes as take place. So far as we know, that is not the case under natural conditions, where colour has a serious and distinct object, mainly protective. Our purpose is not to discuss the question as a whole, much less to discourage breeders who seek to produce new varieties, which are often greatly benefited by the factors introduced. What we desire to submit is that the entire subject demands careful investigation, by reason of the fact that possibly in this way many difficulties would be resolved, and that probably efforts would be deviated into other channels. In some buff breeds the aim is to secure an even tint right through to the skin; in others, black or brown tails have been eliminated in favour of the body colour; in others, the object is to secure a chalky instead of a sappy white. The late Louis Vander-Snickt often said that the surface colour should differ in many breeds from that below, and that there was a reason for this. He had for many years made a study of feather questions, but we fear his lamented death came before his researches were completed. The problem is one to be dealt with by another.

Which Hens as Breeders?

Probably the chief reason why many attempts to advance the average laying of fowls have failed is that the heaviest layers are selected for use in the breeding-pen. Attention has been called to the mistake thus made on several occasions in the POULTRY RECORD, but we make no apology for quoting from the "Reliable Poultry Journal" some observations made by the manager of one of the largest American egg farms:

"Excessive egg-production," says the writer, "is not conducive to the greatest reproductive efficiency. The efficiency of a machine is based on the relation between the quantity of output and the cost of operation. . . . Just as the liability of a machine to break down increases in direct proportion to the rapidity with which it is operated, so is the liability of the reproductive power of a hen to become impaired increased in direct proportion to the number of eggs she is made to lay out of season. . . . If we force her for egg-production fall, winter, spring, and summer, that intangible something which makes the life-germ strong, and which we term invariously vitality, constitutional vigour, and reproductive efficiency, is weakened, lessened, or diluted; so that when we select eggs from these hens in the springtime to reproduce our flock, we are disappointed that a large percentage of them are either infertile, or if not infertile, lack the coveted hatching power; the hen's reproductive efficiency has been lowered."

These are wise words which deserve the careful attention of all practical breeders.

Rearing Chickens by Electricity.

Mr. T. Thorn Baker, the electrical engineer for the *Daily Mirror,* recently conducted some interesting experiments in chicken rearing. He purchased two dozen day-old chicks, divided them into two lots, which he put into foster-mothers, both lots being fed in precisely the same manner. In one of the foster-mothers coils of wires were placed, and the chickens were given applications of high-frequency electric currents, with the result that those chickens which were subjected to this treatment obtained an increase of weight of 38.5 per cent. as compared with the other lot of chickens not so treated; otherwise the two batches were reared under identically the same conditions. At the Ideal Home Exhibition, to be held at Olympia from April 12 to 30, an opportunity will be given of seeing this electrical treatment, and all interested in raising chickens will be able to see exactly how to secure the advantages claimed by Mr. Baker. Arrangements have been made for conducting another experiment on similar lines, with chickens hatched at the same time and of the same breeds, so that a fair test may be made. The experiment will be carried out on the farm of the Dutch Village. It occurs to us that this would be an excellent opportunity for an exhibition of Dutch fowls, and the methods of keeping poultry and preparing for market as practised in Holland.

Memorial to the late Louis Vander-Snickt.

An influential committee has been formed, under the presidency of the Chevalier Schellekens, and representative of several countries, for the purpose of securing the necessary funds and erecting a monument over the grave of Mons. Vander-Snickt, whose labours for the promotion of the poultry industry, not alone in his native land, but elsewhere, it is thus hoped to commemorate. The first list published in *Chasse et Pêche* includes the names of personal subscribers and promises from various societies, and amounts to nearly £85. We hope there are many in the United Kingdom willing to share in this tribute of regard for one whose knowledge on breeding questions was probably unique, and who was ever ready to give his time and thought to serve his fellows. Those who had the privilege of being accompanied by him on tours in the poultry districts of Belgium will doubtless regard the proposal now made as a fitting opportunity for acknowledging the services of one whom it was a pleasure to meet and know, and we hope our own country will take its share in this tribute of regard, thus making the monument to be erected worthy of the man it is designed to commemorate. We shall be glad to receive and

transmit from readers of the POULTRY RECORD donations for this purpose.

Poultry-Keepers and the Coal Strike.

It may be hoped that the great industrial conflict which has filled the thoughts of everyone during the past weeks may be terminated before these lines appear in print. Even if that is the case, its influence will continue for a considerable time. All sections of the community have been adversely affected, some more than others, inclusive of poultry-keepers. Two directions in which they have felt its influence may be specially mentioned, one of which is the advancing prices of foodstuffs, already high, cutting into the profits of the industry, and the other is the lessened demand for produce. Probably of the two the latter has been most harmful. With nearly two millions of men out of work or on short time, and the vastly lessened amount of money at the command of their families, it is only natural that such commodities as eggs should be dispensed with first of all. We heard of one large retailer who acknowledged that he was losing £100 per week on eggs, due to slump in prices and inability to get rid of his stocks. Had this strike taken place in the scarce season the effect would have been less evident, but just at the time of abundance it is specially serious. All that can be done is to face the problem, and the easiest course is to preserve as many as cannot be sold profitably, especially in view of the fact that the period of recovery must be slow.

A HOUDAN PULLET.

BACK-YARD POULTRY-KEEPING.

By GEO. A. PALMER.

OF all the hobbies that can be taken up there is nothing that gives greater pleasure and has more humanising influences than the care of live stock. The town artisan has perforce to be content with something small, and of these there is nothing that gives more pleasure and profit than does a pen of fowls. In his capacity of expert on agriculture and poultry-keeping to various county councils, the writer has visited many hundreds of poultry-keepers in the suburbs of large towns, and has been struck with the moral effect of the hobby upon the men themselves. Either the steadiest men have taken up poultry-keeping or the effect of it has been to steady the men; for neatness and self-respect prevail everywhere among them. The pleasure and pride with which one of them brings out a chicken he reared himself and which has won a prize at a local show is worth going far to see.

No one should underrate the influence of local fanciers' shows. It matters little, perhaps, that one bird should have a few feathers of a better colour than the next one, but what does matter is the thought and loving care, week after week, that has gone to bring it to that pitch of perfection without which it is useless to show at all. The jealousy and cunning trickery which sometimes stain the professional show-man does not reach to this class. It is in the hope that poultry-keeping may spread among the artisans that these lines are written.

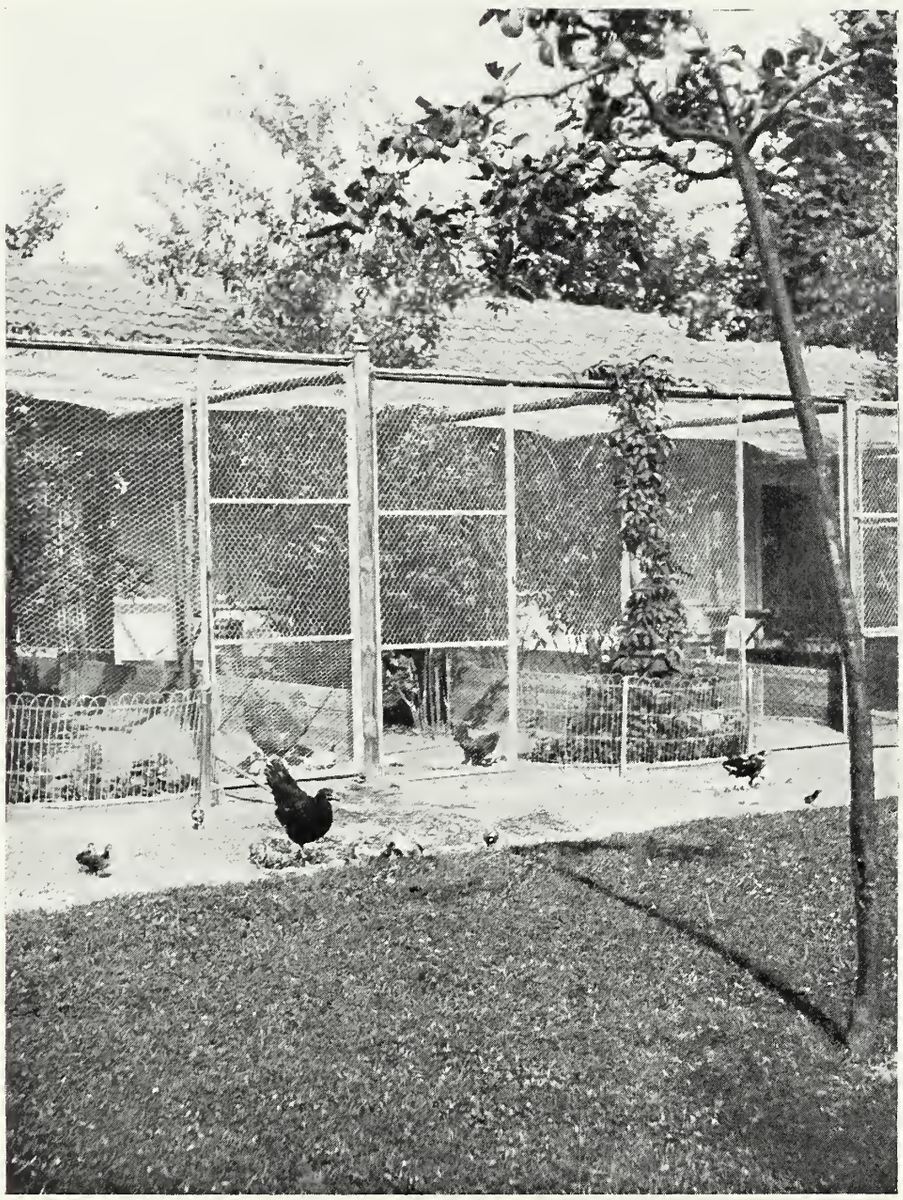
For those with limited space there is but one method of keeping fowls, and that is in sheds. One square yard of floor space is sufficient for each bird with good management. A shed six feet wide, six feet high at front, with a roof projecting well in front to a foot or eighteen inches, so as to prevent rain from driving in, and sloping to four feet at the back will hold two fowls to every three feet in length. The door can be at one side; the front facing south can be boarded two feet up; and wire netting for the top, four feet. The best and, in the long run, cheapest material is seven-eighth tongued deal boarding on two by one-and-a-half-inch red deal framework. Old boxes and felt may look cheaper at first, but do not prove so in the end. If wood is dressed the first time with one gallon of gas-tar, two pounds of pitch, and four pounds of slaked lime, melted and put on hot, and afterwards dressed from time to time with gas-tar, or two parts of that to one of petroleum—which dries more quickly—it wears for a generation. The internal fittings are simple. The floor is of rammed earth, the only admissible one. If rats trouble, wire netting can be spread first and the house set on it, a few loads of soil being wheeled in and rammed on to the netting. This gives a drier floor as it is raised a few inches above the surrounding land.

At the back of the shed, eighteen inches from the floor, two pieces of wood are nailed to the sides of the house upon which the dropping board slides. This is a shallow trough two feet wide with four-inch raised edges. The perch—two-inch square stuff—planed smooth with the sharp edges rounded off is fixed ten inches above the floor of the dropping-board. On the dropping-board or tray is kept three inches of sawdust, which may be sprinkled from time to time with a disinfectant. The manure falls on to the sawdust and dries so rapidly that little smell is given off. This device gives the whole of the floor space for exercise, and the hard earth is sprinkled with straw, fern, or some such litter. Cheap coal-tar disinfectants can be purchased at any chemist's at a shilling a quart. Business men who require quantities buy it at eighteenpence a gallon. As this mixes with fifty times its bulk of water, a very small quantity will serve for a year. Its uses are many. The sawdust under the perch may be sprinkled with it from time to time, and every time the litter is renewed and the hard earth floor swept (which may be about once a month) the floor may be well sprinkled and allowed to dry before putting on fresh straw. Even a spot or two in the drinking water will do no harm. Many of the best poultry-farmers now use medicated food, and on the largest utility poultry-farm in England a little permanganate of potash is placed in the water from earliest chickenhood.

A generation ago very little was known about poultry-keeping, but during the last twenty years many clever men have made this small stock a study, and, to their honour, be it said, have freely imparted to others the knowledge gained by much experimental work. The Utility Poultry Club, now numbering fifteen hundred members, has done much in disseminating poultry knowledge by means of literature and by an advisory board consisting of most of the leading experts upon the subject. Up to quite recent years all small poultry-keepers made the most serious mistakes. The one was keeping fowls in open wired runs on slushy coal-ash floors. The day was spent in misery and the night in pestilent holes devoid alike of cleanliness and ventilation. It is now abundantly proved that even in cold climates birds thrive better in houses partly open in front, even

as the more intelligent of the human race prefer ventilators or open windows in their sleeping apartments. Another neglected pressing need was exercise. Just as the lazy human, by high feeding and the use of motors and electric cars instead of his muscles, has developed liver to an extent not previously known, so with fowls this is the weak organ. Overfeeding with too starchy and heating foods such as maize, barley and, in a lesser degree, wheat, combined with scarcity of green food and lack of exercise has been responsible for that hypertrophy of the liver which has devastated thousands of poultry-yards.

Fowls are subject to many parasitic affections of the liver, such as that caused by Amœba Meleagridis, but with the free use of disinfectants on the floors these can almost be eliminated, and, in any case, are not so common as the fatty enlargements consequent upon improper feeding. Few realise that the proper food of fowls is the same as a wild pheasant lives upon—insects, grubs, seeds, berries, grass, and occasionally grain. The suburban poultry-keeper cannot hope to give the infinite variety to be found in the fields, but he can at least supply green food in the shape of cabbage leaves, boiled turnips and carrots, and avoid adding to the starchy constituents by giving bread and potatoes. He can also add to his food supply by a very simple device. If he fills shallow boxes with soil, sows any kinds of seeds—wheat, oats, barley, mustard, cress — and covers the boxes with wire netting he can at any time of the year, by warmth and moisture, induce a growth of tender green shoots. Then if he places the



PICTURESQUE GARDEN RUNS. [*Copyright.*

boxes in succession in the poultry-run the birds will peck off the shoots as they push through the netting, and cannot get in to scratch. Insects cannot be supplied, but albuminous food, in the way of meat meal and fresh butchers' scraps, can always be obtained.

Fowls in confinement should never have food too easily obtainable. Although a feed of ground meal, such as sharps, with a dash of malt culms, pea-meal, or linseed occasionally, by way of variety, may be given in a trough to start the day, it is infinitely better to give no moist food at all unless it is dried off from the sloppy to the crumbly state, and even then only in such quantity as to leave the birds still keen and hungry enough to work hard. If a little grain is scattered in six inches of straw they will have an hour's work in raking it over many times, and in this find the health that exercise alone can give.

In a country parish recently a retired sea captain was at work in his garden. His friend, the rector, leaned over the gate and asked, "How much is your work worth an hour, Captain?" The old man of the sea looked up and said, "Compared with the work done by a professional gardener mine is worth very little, but as a means of bringing health, its value to me is inestimable." The rector shook his head and murmured, "Truly the fool is answered according to his folly." So our feathered pets find health in every scratch, and if fed largely upon sound, dry white oats will keep pictures of bright rosiness for the two years of profitable laying life that is allotted to them. The waste from the smallest cottage, crumbs, gristle, bacon rind, and the inevitable scraps "from the master's table" go far towards keeping a pen of a dozen fowls, and the owner finds, perhaps, not a remunerative occupation for his spare moments but a relief from the tedium of an over-strenuous life.

PERSONAL LETTERS FROM AN OLD FANCIER.

II.—TO A SHOW SECRETARY.

Dear Mr. Walden,—Many thanks for your promptitude in remitting my fee and expenses. Formal receipt is enclosed. I wish all secretaries were like you. Some are very dilatory. In one or two cases they have seemed to think that it was time enough when the next show was in prospect. It is true that in the course of many years' experience nearly all have been paid sooner or later. Still, there are a few instances in which the memory of a pleasant day is all that I had. The less said about these the better.

You have now had some years in your present position, but from what you tell me there are many anxieties, and I gladly respond to your request to give you a little advice, whatever it may be worth. I fully sympathise with you, knowing from the inner side what it means. Do not be disheartened. Perhaps there is a suspicion in your mind that your arduous labours are not appreciated and a wonderment whether it would not be better to resign in favour of another. It is all a mistake. I can tell you that many have spoken most warmly as to what you have done. They do not express what they think, but the feeling is there. A little praise would be acceptable. Yet this has been given so often that it would be tautology. Still, as a wife likes to be told by her husband that he loves her, although she has heard it a thousand times before, and knows such to be the case, it may be that secretaries are as human, if not as feminine. Take that much for granted.

That there are ebbs as well as flows in shows is a common experience. Probably you are in one of these back tides. If so, be ready for the turn. It may be that there is less enthusiasm on the part of your committee than was the case at first, or that you have lost some of your best helpers and supporters, and others have not come forward to take their places. It will all come right if you are patient and keep the ball rolling. Meanwhile look out for a few of the younger men—the budding fanciers—who think less of what they can get than do some others, and are willing to work hard for the glory of it. Too often are they kept outside. Give them a chance. You will never regret it. The worst committeemen are those who hardly ever attend a meeting, and turn up wanting all the picked jobs at the last moment. They will even wish to boss *you*, whereas your business is to command them. If they are well-to-do and will pay handsomely for the privilege, let them be ornamental. You have the best of the compact. They must, however, conform to your arrangements.

You mention the difficulties which arise with exhibitors and others, and as to finance. The former will always be. My dear sir, what are you there for except to be grumbled at and to be blamed for everything? That is the fate of all who lead. Many a general has been retired owing to a blunder of someone else, and which could not be avoided. Such cannot be helped. He would have been heralded as a hero had all gone well,

and it is fitting that he bear the brunt in case of disaster. A kick hurts in accordance with the sensitiveness of the object—not its own force. If it fails to trouble you it pains the kicker.

Three of the qualities which are essential to a good secretary are "Faith, Hope, and Charity—and the greatest of these is Charity," if I may quote from the good old Book. Faith in yourself, Hope for your co-workers, and Charity for the failings of everybody. These do not complete his equipment, but they go far.

A great mistake is made by many show secretaries in that they make themselves too prominent. They are fussy, thinking nothing will be right unless they do it themselves, and work themselves to death doing that which a hundred others can do as well, instead of directing and pulling the strings. The best secretaries are those who are seldom seen, but their work is evident all the time. So perfect is the organisation that everything goes forward smoothly, without a hitch, giving the idea that it is an easy job. You know better, and could tell of long hours and sleepless nights spent in perfecting the detail, in anticipating everything. One loose nut may sink the ship. I remember once going on an expedition and was helping with the catering for the party. My colleague seemed to be more anxious that a supply of salt should be taken than almost anything else. I got tired of hearing him ask if the salt had been included. Yet he was right. On a former occasion a similar trip had been spoiled by reason of its omission. Nobody enjoyed their food. Frowns took the place of smiles, and the day ended in gloom. Be sure the salt is there.

Never mind if you are forgotten. That is the way of the world. You are the captain whose place is on the bridge, not in the saloon or on the promenade deck. A Spanish fable tells of an island with many privileges but no hens. In process of time a man arrived bringing with him some fowls, from which eggs were obtained, and the people were taught by him to eat these boiled. He died, but others discovered that eggs could be poached, or fried, or scrambled, or made into an omelette. Finally, it was decided to hold a national festival in order to honour the discoverers of these various methods of cooking eggs, and thus adding to the gastronomic delights of the people. Then someone said, "All this is very well, but what about the man who brought the hens?"

That reminds me it is sometimes advantageous not to be seen. One of the cleverest secretaries I know adopts a plan which is worth recounting, designed to circumvent the tricksters. His is a big three-day fixture. Loud complaints are often made by last day visitors at other shows that some of the best birds are removed before the announced time of closing, which is a breach of faith. The culprits are generally the bigger exhibitors, who can always find an excuse, that their bird is sick, or that they have a train to catch which will save an all-night journey, or that the wife has been taken suddenly ill, and it is difficult to say No. I well remember one instance. A first-prize bird was apparently in a serious condition, and leave was given for its removal. The next day I was judging a show about 100 miles away. There it was there as bright as possible, and scored again. Soap can do many things as well as make pills and wash clothes. Had such leave not been obtained, it could not have got from one place to the other. The secretary referred to makes it an unalterable regulation that no exhibit may be removed before the time of closing without a pass signed by himself, and the committee and attendants dare not break it. After lunch on the last day he goes home for a few hours' sleep, only turning up as the gates are closing. Exhibitors may swear at him, but the fact is none the less true that he has scored.

Some of these exhibitors are a great nuisance. They seem to think the whole show is run for their benefit, as it is in too many cases. It is told that at a certain exhibition—not of poultry—which shall be nameless, an arrangement was in operation for some years by which, on payment of a stipulated sum to a prominent dealer-exhibitor, he undertook to send so many birds, paying no entry fees, and receiving no prize money. The result was that nearly all the prizes went to his exhibits, whether fairly or not is unimportant. If true, it was a fraud upon others, and such secret bargains should make the perpetrators amenable to the law. There are many other ways in which a secretary needs to drive with a firm hand and a tight rein. It is the smaller men, the multitude, who make or mar a show, not the pot-hunters or deck-sweepers. One ought not to have any privileges denied to the other, and the bigger the exhibitor the more essential is it that the rules shall be fairly and strictly enforced. Sometimes these attempt to compel the appointment of a certain judge. Regard all such with suspicion, for, whilst it is useless engaging anyone to act in that capacity who is unacceptable to the general run of possible supporters, I should say if a threat is made that no entries will be sent unless a specified judge is appointed, do not have him at any price. There is something behind it unrevealed. I have known a judge bring an exhibitor's birds, pen them, and repack at the end. Happily such cases are rare. What is done does not present itself so flagrantly. Trickery there is in abundance, but it is hidden.

I have always thought that, subject to defined rules equally applied and where is an adequate staff of helpers, it is reasonable to allow exhibitors to pen and repack their own birds, but it

needs system and control. Treat all alike. At some shows it is impossible.

You ask my opinion as to the letters which have been appearing respecting the decoration of pens. I like to see a show made as attractive as can be. Much more might be done in that respect, but by the show authorities. To allow exhibitors to do this would open the door to all sorts of tricks. Nothing distinctive should be permitted. I have seen, as you must have, all kinds of signs put in the pens as indications to the judge, such as straws inserted, or even the litter marked in specified ways. Even hampers may designedly reveal the owners! It is necessary ever to be on the look out for dodges of this kind. And at indoor shows the better plan during judging is to rigidly exclude all exhibitors, whether committee-men or not. If that is done consistently no one should be offended; otherwise it will be safe to assume your rule is warranted. At out-door one day summer shows it is much more difficult. There especial care is necessary. If an exhibitor is seen to throw, from the back, grains of corn to his birds, when the judge is on the other side, turn him out, and it might be a good plan to expel the judge also. It is suggestive of collusion.

This leads to the question which has often been discussed—namely, whether a secretary should exhibit at his own show. It may be a deprivation and an act of self-denial not to do so, but I am sure you will agree that it is the right policy to adopt, and will enormously strengthen his position. It would be difficult to apply the same rule to all members of the committee, though that would be the ideal condition. A secretary, however, occupies a different position, and should be content for the time being to sacrifice himself to that extent. Once when I was occupying the post you now hold, and also was a somewhat prominent breeder, the judge, in handing in his slip for the class in which I should ordinarily have held a good place, said, "I have given first prize to this bird," pointing to the winner. "Have you done right?" was my answer. "Oh," he responded, "I thought it was yours." We never engaged him again. What would have been my feelings had that bird been mine you may imagine, as what others might have said, for it was not the best. Cæsar's wife should be above suspicion. And I cannot too strongly condemn the system which sanctions men both judging and exhibiting at the same show. Many tales could be told of the evils arising from that practice.

One of the most amusing instances met with may be told as a warning. A breeder was asked to loan a bird for a certain show, as that of the borrower had gone off. He did so on the usual terms—namely, half the winnings. It won first prize and cup, and was claimed at catalogue price, £5. The owner had never thought of that, and had refused £20 for it a week previously. He had to grin and bear it. Exhibiting borrowed birds may not be quite so common as it was, but there is, sadly, too much of it, *sub rosa*. Would that it could be stopped.

There is another question which deserves the careful consideration of secretaries and committees—namely, as to disqualifications. Judges are frequently guilty of awarding prizes to birds which they know ought to be branded as faked, not wishing to bring a hornets' nest about their ears. Sometimes personal animosities, however, lead them to do so. But the main blame must be laid upon the show authorities, who often object or refuse to accept disqualifications, especially if a prominent exhibitor is concerned. They think that it will give a bad name to their show, and that as so many are guilty they will boycott exhibitions at which there is any danger of being found out. Such action is folly, but it is also making themselves accessories to fraud. Where a judge is certain of his facts and can justify his decision, he should be supported to the full. Believe me, that nothing so advertises a show among honest exhibitors, who are the great majority, as fearless exposure and penalisation of those proved to be trying to win unfairly. If judges and committees would do their duty fearlessly the Fancy would speedily be purified. It is often impossible to disqualify, as the evidence is insufficient, and the greater number of tricksters will never be caught. When discovered there should be no mercy.

There are two classes of men whom you should ever consider among others, Judges and Pressmen. Pay a proper fee to the former, treat them fairly, and you have a right to expect adequate service. So far as my experience goes, you have always done so. But that is not as general as should be. Recently I was invited to act at a large exhibition, and told that the fee would be three guineas inclusive of all except hotel bill. As I should have to take a journey of 300 miles there and as much back it did little more than cover the ticket and incidental expenses, to say nothing of my time. How is it possible for the majority of men to render service under such conditions? It is thus the judicial office is debased. We want a minimum fee for judges, plus legitimate expenses. I know judges are expensive to societies, but so is everything else. Sometimes committees seem to have no conscience. Once I was asked to act at a new show within fifty miles of my home. The committee frankly asked me to do it gratuitously, except for expenses, as that was their first year, to which I agreed. By starting about seven in the morning and returning the same night they saved a hotel bill. The secretary was a cute fellow. He had looked out the

return fare (third class), and on leaving, after judging more than four hundred birds, he handed me an envelope with 9s. 3d., the exact amount; and I returned depleted by the cost of my breakfast and tea en route. It did not happen again.

The Pressmen you have chiefly to consider are those within your own district. They can help you to a good gate, which is of supreme importance. Judicious notices for some weeks in advance, constant courtesy and attention awaken interest and secure local support. You do not want to bring down a horde of outsiders to carry off all the prizes provided in the district. Some outsiders are desirable as a question of competition and to arouse emulation. And at the time of the show every reporter, whether local or from a distance, deserves consideration; his task is difficult enough. Do not make it harder. I remember an officious secretary who treated one and all as if they were rogues and vagabonds, not representatives of one of the great powers of the day. They unitedly refused to say a word about his show, which died an unnatural death.

What I have seen of your work shows that you realise the importance of having everything ready and all work done in time. I have had to make judging books out myself before to-day, and arrived at a show to find not a bird penned. Let me tell you of what occurred at an exhibition many years ago—one of the best pieces of fun I ever had. A class for cats was included as a great novelty, for such a section had never been seen before. More than a score were entered. They were put in ordinary poultry pens. Next morning every one had got out. The excitement before they were captured was exhilarating, if exhausting. Then came the problem, which was which? Before the business was put straight the tears shed by maiden and widowed owners were profuse.

Forgive the garrulousness of an old fancier, but I enjoy recounting the days that are gone and calling to mind show secretaries and others whom it was a pleasure to meet, and of whom my remembrances are vivid and glad. Some there are who stand out prominently. Strong and ever courteous, firm and yet gentle, with eyes everywhere and yet time for the amenities of their position, true leaders of men within the sphere of their orbit, forgetting nothing essential, and doing nothing without a purpose. That you may be added to this galaxy of worthies is the earnest hope of

Your sincere friend,
ENOS MALPAS.

P.S.—Keep your eye on the assistants. Sometimes they are in the pay of certain exhibitors, whom they favour. And, when you can do so, never make late entries the last numbers in any class. Either let the judge know the owner of every pen by giving him a catalogue before judging, or deny him the knowledge of any.

AN UP-TO-DATE RANGE OF BREEDING-PENS. [*Copyright.*

Egg Farming in South Africa.

The *Natal Mercury* says that Mr. Alpheus Williams' poultry farm at Kimberley returns over £700 annually in sale of eggs for table purposes, in addition to which eggs are sold for hatching.

GERMAN POULTRYDOM.

II.—DOMINANT FACTORS.

By A WELL-KNOWN GERMAN POULTRY-KEEPER.

TWO powerful organisations control and stimulate the current of German poultry endeavour: the one the "German and Austro-Hungarian Poultry Breeders' Club," cherishing in common with the English Poultry Club the ideals of the Fancy; the other, the "German Poultry Breeders' Club (Berlin)," devoting itself after the manner of the N.P.O.S. to the promotion of utilitarian interests. In this connection, and throwing its weight entirely in the scale of utility, a third, and by no means less powerful, factor (it could prove the most potent of all, would it but put forth its entire strength) should also be cited: Government aid, which subject, however, I intend to discuss in a future article, confining myself for the nonce briefly to reviewing the origin and progress of the before-mentioned voluntary agents for the promotion of poultry-culture.

The "German and Austro-Hungarian Poultry Breeders' Club," the senior of the two above-named organisations, was, as stated in my previous article, founded in 1881, chiefly at the instigation of the late Councillor H. du Roi, during many years a most prominent figure in German poultrydom. For some time past the idea of establishing a club on national lines had certainly been cherished by fanciers and advocated in the poultry Press, but there the matter rested until du Roi—striking the iron whilst hot—revived the project when attending the Poultry Congress at Elberfeld.

The club, as originally founded, under the title of "The German Poultry Breeders' Club," consisted of fifty-one members, under the presidency of Herr A. Seyd, of Elberfeld, supported by the indefatigable H. du Roi as vice-president.

In the beginning the outlook was not a particularly bright one. Differences arose between the Fancy and Utility sections, resulting in a dangerous "tug-of-war" game that shook the foundations and threatened to bring about the downfall of the newly-erected structure. Dissatisfied with this state of things, twenty-five of the fifty-one members, representing the Fancy section of the club, met again twelve months later at Brunswick for the purpose of discussing matters and shaping a proper course for the future when, and just in the nick of time, a spirited manifesto dispatched by a numerous body of Austrian fanciers—its keynote, their Emperor's motto: "Viribus unites"—arrived, evoking much enthusiasm, and causing a general desire to respond to the invitation of joining forces with the kinsmen across the border. Thus came about the fusion of German and Austro-Hungarian fancierdom into one body, thenceforth known as the "German and Austro-Hungarian Poultry-Breeders' Club," with H. du Roi as president, and Baron Villa Secca (Vienna) as second in command.

Despite this important accession to the club's strength and influence, small progress appears to have been made during the first decade of its existence, which was really a period of continuous struggle against open and secret enemies, aggravated by lack of funds. In these circumstances little could be done beyond participation in some of the more important shows of the country—viz., Hanover, Leipzig, Dresden, Halle, where the methods of judging and classifying poultry, advocated by the club, had been accepted.

One of the greatest difficulties encountered at that time was the lack of capable judges, rendering it imperative for the club to develop an educational activity. Truly there was no lack of goodwill, undoubtedly a most desirable asset on the part of candidates—but insufficient, unless coupled with natural capacity and experience, qualifications scarcely to be expected as existent at that early stage of development of the German Fancy. The compilation of a "National Standard Work" was next attempted, to act as guiding star through the misty uncertainty of poultry types, the idea having first been mooted at the Berlin Congress of 1891 (attended by fifty-six delegates representing 246 societies). The subject, however, bristled with difficulties, little or no progress could be made, and even at this time of writing the National Standard work is still, as it was twenty years ago, mere "music of the future!"

Meanwhile the club's membership had shown a steady increase, its influence had extended, and its finances been placed on a thoroughly sound footing. In 1892, when the first club show was held at Halle, entries amounted to 1,201; in the following year, at the first National Show, they increased to 3,432; in 1894, to 3,817; the highest total being reached at Berlin in 1910, when 9,038 fowls and pigeons and 75 rabbits were penned under the "National" banner. The takings then amounted to 82,000 marks, the outgoings to 85,000 marks, leaving a deficit of 3,000 marks (£150), generously defrayed by the Zoological Gardens Society, the owners of the Exhibition Hall.

For the "National" of 1911, which was to

have been held in the beautiful city on the Isar—Munich, the capital of Bavaria—extensive preparations had been made, when, like a thunderbolt, the news arrived from Brunswick that H. du Roi, the president of the club and the heart and soul of all its undertakings, had in the midst of his labours been stricken by fatal illness and passed away. Almost simultaneously an edict was issued by the Bavarian Government prohibiting "the holding of exhibitions of any kind of live stock," owing to the prevalence of foot and mouth disease in certain parts of the country, and necessitating the abandonment of the "National," looked forward to with so much joyful expectation. Truly a year of disappointment and sorrow for German fancierdom!

The death of H. du Roi at the age of seventy-two, yet still hale and hearty, full of energy and enthusiasm, proved a sad and almost irreparable loss to the club whose interests during his long term of leadership he had almost made his own. His was the cult of the beautiful; material considerations never appealed to one who loved the Fancy for the Fancy's sake. In his splendid park near Brunswick the lordly Phœnix, the stately Yokohama, the pugnacious Old English Game, and other breeds rarely ever seen in German fanciers' yards, found an ideal home. Small wonder in these circumstances that the club was not infrequently accused of having, under du Roi's leadership, "coldshouldered utilitarian interests," thereby "alienating the sympathies of agricultural societies and losing the support of Government." But could it be otherwise? I think that anyone conversant with the progress of poultry culture, and especially the methods of specialisation introduced within the last decade into both the Fancy and Utility branches, must have come to the conclusion that co-operation between so widely divergent interests is a matter of impossibility. The "proud sister and Cinderella" must each work out their own salvation, striving after the ideals dear to their hearts. Some day, perchance, their paths may unite again, but the time is not yet!

We may, therefore, take it for granted that the "German and Austro-Hungarian Poultry-Breeders' Club," under the leadership of its newly-elected president, Heinrich Kreutzer, will continue its onward march towards the goal indicated by du Roi, and represented by the highest ideals of the Fancy, leaving the development of utilitarian interests in the capable hands of the "German Poultry-Breeders' Club (Berlin)"—presently to be referred to—and the Provincial Chambers of Agriculture. The principal activity of the club will be centred, as heretofore, in the holding and arrangement of the National Show, which is to serve as a pattern for all other exhibitions of that description, and in the wider distribution of the club ring, which, first adopted in 1893-4, is now in use in all the most prominent breeders' yards. In 1897, 68,000 fowls and 36,000 pigeons were "rung"; in 1910 the numbers had increased to 441,000 fowls and 214,000 pigeons, which figures testify more eloquently than any other evidence that could be adduced to the club's activity and growing popularity.

Turning to the second of the two powerful organisations mentioned at the commencement—the "German Poultry-Breeders' Club (Berlin)," the guardian of utilitarian interests—we find that it is of much more recent origin, not having been founded until the 18th of January, 1896, a memorable date, by the way—the twenty-fifth anniversary of the birth of the German Empire.

The considerations which led to the foundation of this club were mainly based on the well-known, statistically established fact that Germany had for many years past been unable to produce anything like a sufficiency of eggs and table poultry for home consumption, and in consequence had been paying considerable sums annually to other countries for the supply of these commodities (at the present time the figure is little short of £11,000,000), despite the indisputable fact that poultry-keeping in connection with general farming could be made remunerative. Taking the cost of maintaining fowls on a farm, roaming at large and picking up much stray food, insects, &c., at 2.50 marks (2s. 6d.) per head, and assuming the average annual production of each hen to be ninety eggs (a very moderate estimate), selling at 5pf. each, or a total of 4.50 marks (4s. 6d.), a profit of 2 marks (2s.) per head would be realised, which might be considerably increased by judicious management. A handsome return could further be obtained from the rearing and fattening of table poultry, the demand for which is continually increasing. Thus reasoned the founders of the "German Poultry-Breeders' Club," started with the object of organising and extending the realm of Utility poultry culture fifteen years ago, and time has proved the correctness of their calculations. At the present moment the club is the strongest of any of the German poultry societies, boasting a membership exceeding 1,400, recruited principally from residents in the country, including pastors, Government officials, landed proprietors, farmers—not forgetting their wives and daughters—the ladies, as might well be expected, forming a numerous and most energetic section of this up-to-date Society, which, with its affiliated twenty local branches, is rapidly becoming a power in the land.

With the object of improving methods of marketing and promoting the "cult of the new-laid egg," a number of depots for the sale of the members' produce were established in twenty-two different centres of consumption, local store-

keepers acting as agents. All eggs sent out by the Society's branches bear the stamp C.D.G.Z. (Club Deutscher Geflügel-Züchter) and the member's number. Special rules concerning frequent collection, cleanliness, weight, &c., are laid down and strictly enforced. Another important step in the right direction has been the establishment of breeding stations in very nearly every part of the Empire, where sittings of eggs and stockbirds can be obtained by the members at moderate prices, the selection of breeds being confined to those officially recognised by the local Chamber of Agriculture.

The annual subscription for members is 10s., which entitles them to have "free delivery" of the club organ, the *Agricultural Poultry Journal,* and to one free advertisement of five lines per quarter in its columns. Other privileges are: Reduced prices of implements and feeding stuffs bought through the agency of the Society, and the use of the club library, which is continually being augmented, and to which the slightly altered dictum might rightly be applied that whatever you don't find there "isn't (poultry) knowledge." I must not omit to mention that lectures by experts are frequently delivered in country districts and generally well attended, and that, in short, everything is being done to promote "poultry culture on advanced lines" that can be devised by the go-ahead president, Mr. F. Pfenningstorff (Berlin) and his energetic committee.

In 1910 the first "Utility Poultry Show"—heralding another important step forward—was held by the club at Berlin, proving a great success and attracting over 2,000 entries. Last year's repetition at Düsseldorf, however, did not quite realise expectations, the falling off being undoubtedly due to the out-of-the-way situation of that city in the north-western extremity of the Empire. A return to Berlin in the case of the next event appears, therefore, highly probable and desirable, the capital being easily accessible from all parts of the country.

At poultry shows of this description exhibits are not judged according to the standards of the Fancy, but in conformity with a system specially adapted to the requirements of Utility. Orpingtons, for instance, must be longer in the leg and less fluffy than the present show type, also size and weight should not be excessive; Brahmas favour the American type, which permits but scant leg feathering; Langshans, as a matter of course, are of the Continental clear-legged variety; whilst Minorcas and Leghorns must curb any tendency they might evince in the direction of excessive comb and lobes. As members are continually enjoined to conform to these Utility standards, which have, moreover, been accepted by agricultural show committees in all parts of the Empire, a very powerful counter-weight is thus created to the up-soaring tendencies of the Fancy.

In addition to the two principal organisations here described, there exist, as already indicated, many local societies for the promotion of poultry culture, and specialist clubs, the latter alone numbering fifty-three for fowls, four for waterfowls, and forty-four for pigeons, which subject I hope to refer to on some future occasion.

A FARMER'S TYPICAL POULTRY-YARD. [*Copyright.*

THE INVISIBLE EGG.

THE WONDERS OF EGG-GROWTH.

No. 2.—THE FUNNY EMBRYO.

Written and Illustrated by James Scott.

IT was formerly believed that a miniature model of a chicken existed in the egg, and that this was gradually unfolded or enlarged, similar to the way in which a baby grows to manhood or womanhood. The microscope, however, dispels all such fantastic ideas.

I have in my possession a very extraordinary set of microscopical slides depicting the changes that occur in the developing chick every half-dozen hours from the commencement of the germ's actions to ninety-four hours' incubation. We first see a tiny streak, and in the second stage this has become longer and distended at one end, while at the other it is knobbed. In the third, fourth, and fifth periods these details are strongly emphasised. The sixth slide (thirty hours after incubation begins) depicts a distinct advance, in so far that the embryo's head and thorax and the blood-vessels are numerous and strikingly displayed.

From this point onward the energies of formation are concentrated on minute internal structures which represent the subsequent organs. As I proceed with the description of the various modifications, I will make everything as clear as I can for the ordinary reader. I shall not be altogether able to avoid the use of scientific names; but where these have to be used, care will be taken fully to explain them.

I have already stated, in Chapter I., that the *blastoderm,* or disc on top of the yolk, is the portion whence the chick starts growing. It consists of two layers of minute cells, and will not further act unless it has been fertilised. Then division and folding occur in a very peculiar manner. A faint white line reveals itself along it. This is called the notochord, and results from a folding of the material. It subsequently becomes the spinal cord, and round it develop the vertebræ of the backbone. At one end of the white line a small knob and "neck" show themselves, as the precursors of the head and brain. The backbone is indicated by darkening crosslines midway between the two extremities. The segments indicating the vertebræ, or separate bones, are at first few and slender; but the number is rapidly augmented, while their individual sizes increase. In Fig. 5 may be seen the appearances of the chick when about thirty hours old.

At this point it will be advisable to make a few statements concerning definition. The objects illustrated are thin sections or layers stained with dyes which cause certain parts to become very clear and distinct. It is a curious fact that although when various substances are examined in their usual states they exhibit little if any variation, upon being treated with suitable chemicals certain parts stand out boldly from the remainder owing to a response or affinity for the solutions introduced to them. An analogy may be mentioned in connection with the dyeing of wool and cotton. Suppose we soaked a fabric composed of the two kinds of fibres in a solution of picric acid. Only those of the wool would become permanently stained yellow, so that by this means

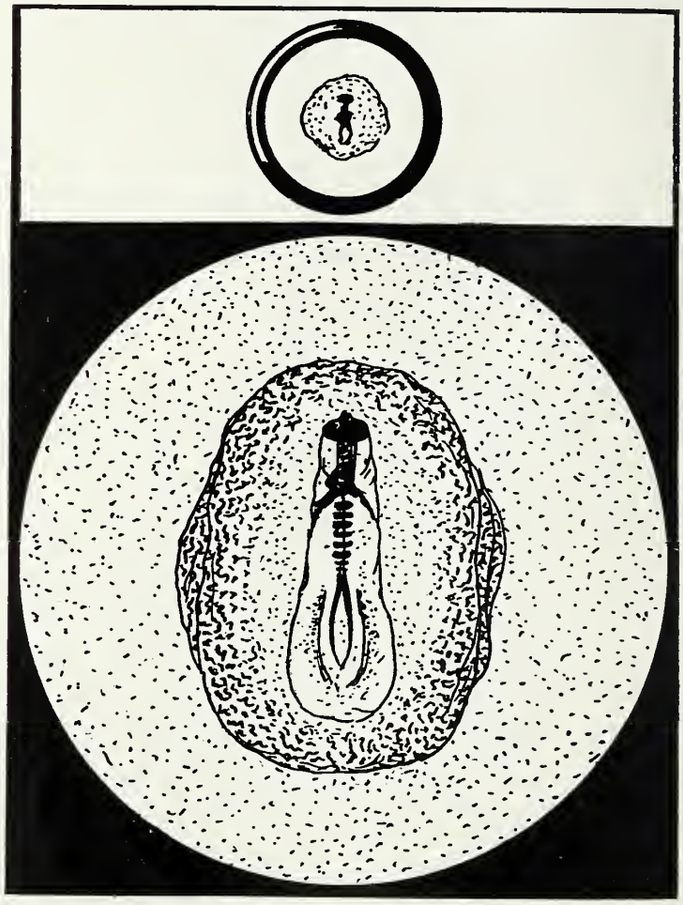


Fig. 5.—Above is a slide with the embryo about natural size when thirty hours old. The larger circle shows it much magnified. [*Copyright.*

alone we are able to distinguish animal from vegetable matter.

In a similar way, by impregnating the embryo

and its surroundings with a particular stain, the newly made forms are darkened and contrasted with the other details.

Observations of the various features become

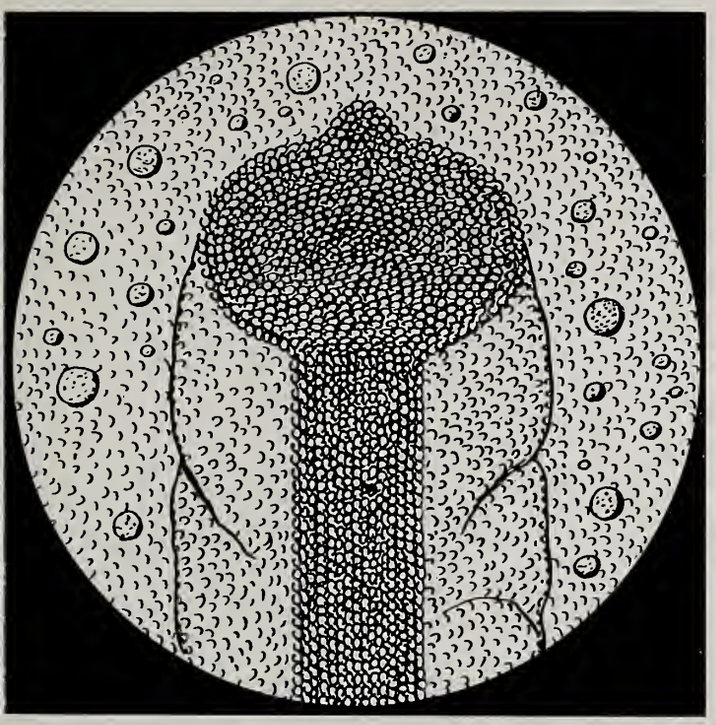


Fig. 6.—A magnified pinhole view of the forepart of the embryo head, on the sides of which eye spaces are developing. All is cellular. Compare with Fig. 7. [*Copyright.*

clearer when moderate powers only of the microscope are used. In Fig. 5 is such a magnification of the stage thirty hours after incubation began. The general appearance is rather speckled, because of the complicated arrangements of the normally invisible cells, the globules, and the granules. When, however, any of the parts are enormously magnified they resolve themselves into cells or meshes as depicted in Figs. 6 and 7.

When we examine the second stage of development shown (seventy hours after the beginning) we find that it appears as in Fig. 8. I have shown in Fig. 6 how the head looks when it is greatly magnified. Bear in mind that the level substance behind the rounded portion belongs to the head. You will see that it is wholly composed of a number of little circles representing cells, which for convenience may be likened to bubbles having permanent, insoluble skins. A kind of veil (called the *amnion*) envelopes these parts, and around them can be observed globules of transformed yolk and albumen. Each little cell divides across, thereby making two halves destined to undergo separate enlargement and splitting on their own account. This process continues regularly. The cells possess what are termed nuclei, or life specks, but to enter into a description of such objects would be too technical for the present occasion.

The fore-brain is indicated by the swollen front piece in Figs. 5 and 6, while the eyes will come—one at each side—in the same area. The embryo eye is at this period little more than a vesicle or bladder in which the cells divide and soak up nutriment for further elaboration.

The hind brain is represented by the straight piece, which might very excusably be mistaken for a neck. The heart is situated at the lower end of this length, and is at first simply a kind of swelling, or expansion, of the adjacent parts. Near it, from both sides, spring oblique tubes, which later on become the chief blood vessels. These absorb blood from the adjacent stores of the *blastoderm,* the outer areas of which become speckled with little branching wavy tufts, as in Fig. 5. These gradually get linked together, as they lengthen, into a number of small blood vessels.

Although I have spoken of blood, it is really difficult to explain just how this is prepared. We have in the beginning only (apparently) albumen and yolk. These contain other ingredients, however, which can be extracted therefrom by suitable chemical methods. But the constituents are not blood; yet the bird, when hatched, will be full of this bright red fluid. It is evident that it must be made out of the substances in the egg; but we can go no further than this in our statements.

How it occurs is a mystery entirely beyond us.

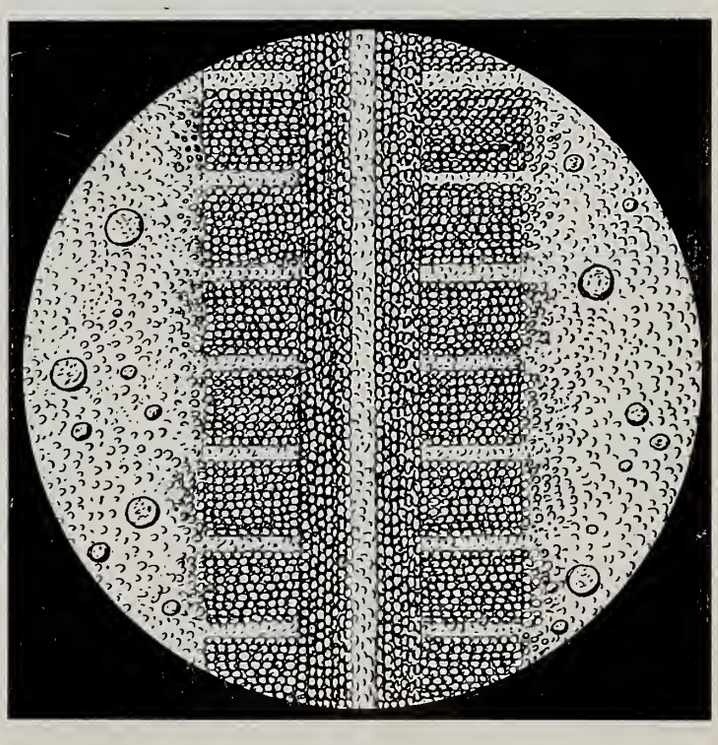


Fig. 7.—A magnified pinhole view of a portion of the embryo backbone, showing how it is composed of amalgamated cells. The clear central space indicates the forthcoming spinal cord. Around the object are globules of egg substance. Compare with Fig. 5. [*Copyright.*

In Fig. 7 is shown a section of the newly developing backbone. Along the centre is the embryo spinal cord. One's first impressions of

these parts is that they are constructed of a number of tiny spheres, the middle ones being denser and deeper than the remainder, and having been pushed up into position as though Nature had played with a lot of tiny marbles. What has happened is that a host of cells or bladders have had implanted in them, during their own division, substances which will attract lime and phosphorus. The cells absorb the special kind of nutriment suited to them. Lime atoms within them attract mineral matter and phosphorus to form the hard skeleton; others coax out fluids or semi solids, to compose flesh and blood, and the remainder seek those particles which can be turned into feathers and eyes, &c. The most marvellous selection,

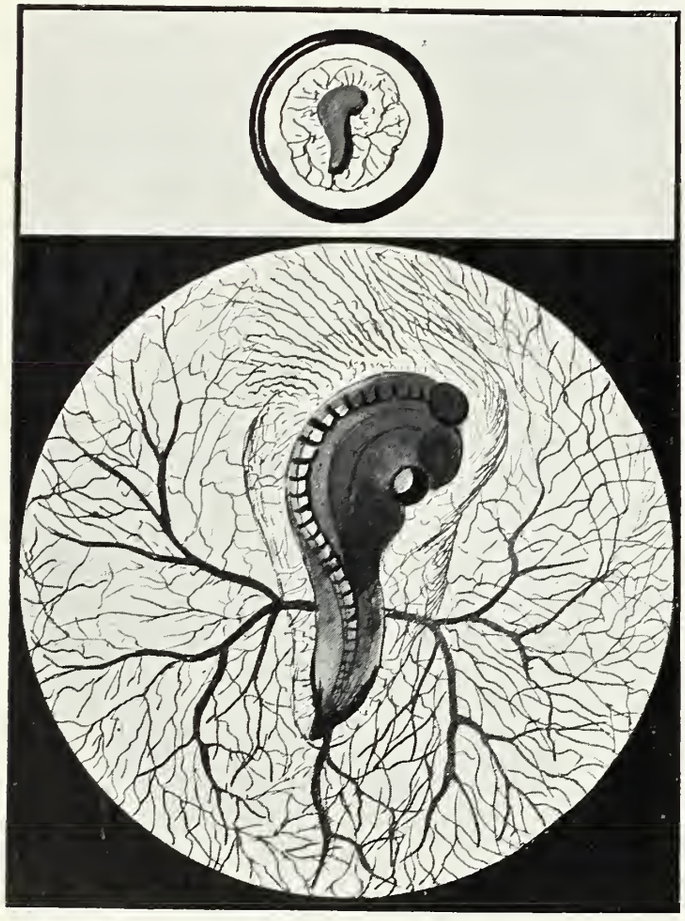


Fig. 8.—The upper part of the illustration is a slide holding a chick of seventy hours incubation. In the larger circle is shown the embryo considerably magnified, the eye and backbone being very prominent. [*Copyright.*

perhaps, belong to the atoms which construct brain and nerves, without which all other parts would, subsequently, be useless.

We cannot help noticing that there are some thin wrappers for the embryo, the exact character of which it would be very difficult to explain in common language. They, too, are made from the original substances surrounding the embryo, and are, of course, extremely useful adjuncts, as they not only hold the developing structures, but evidently allow fluids to be strained inwards or outwards, as necessary.

It should be noticed that the changes so far undergone have happened within the space of the *blastoderm,* or disc, so far as the embryo is concerned. Of course, the albumen and yolk right as far as the shell must be radically modified; but the most striking and visible alterations occur in the portions illustrated.

Out from the multitude of cells involved (which by multiplying and absorbing the albumen and yolk, subsequently contracting and modifying into a fluffy yellow ball) will come a creature with an instinct which is equal to intelligence in so far that it will guide the creature so made to deal, at once, with the complicated world into which it is suddenly thrust, as though it had been familiar with it for a very long time.

POULTRY IN LONDON FIVE CENTURIES AGO.

THE consumption of poultry in London was then (fourteenth century) sufficient to maintain dealers in such feathered ware, for in a patent addressed to the Mayor in the first year of Edward III.'s reign, among other crafts are enumerated " poulters, fishmongers, and butchers " (Puleterii, Piscerarii, and Carnifices). In 1345 (19 Edw. III.), the city authorities finding that " folks bringing Poultry to the city have sold their Poultry in lanes, in the hostels of their hosts, and elsewhere in secret, to the great loss and grievance of the citizens," ordained that the Poultry should be brought " to the Leaden Hall, and there be sold and nowhere else "; but the residents in the city must not go there, but " sell their Poultry at the stalls (in the Poultry), as of old they were wont to do." " Also, that no cook or regrator shall buy any manner of Poultry at the Leaden Hall, nor yet at the stalls, before Prime rung at the Church of St. Paul, on pain of forfeiting the Poultry bought, and going bodily to prison."

Twelve years subsequently the poulters, freemen of the city, were forbidden standing " at the Carfukes of the Ledenhalle with Rabbits, fowls, or other Poultry "; but if they wished to carry them out for sale they must do so " along the wall towards the west of the Church of St. Michael, on Cornhulle." The " Carfukes," like the Carfax at Oxford, was probably a four-faced fountain, situated where Leadenhall and Gracechurch streets meet.

For selling Pigeons " putrid and abominable to the human race " in 1365 one, " John Russelle of Abyndone, Poulter," was put in the pillory, " and the said Pigeons burnt beneath the pillory." The jury who inspected the Pigeons was constituted of two " pyebakeres " and five cooks.

In 1416 (4 Hen. V.), it was ordained that Geese should not be deprived of their giblets by poulters, but be sold whole. Monks of that era evinced either their fondness of Poultry, or their weariness of a fish diet, by maintaining that on fast days they might without sinning eat either, for the singular reason that God created both birds and fishes on the same day, and out of the same material—the water.

INTERNATIONAL STANDARDS.

By EDWARD BROWN, F.L.S.

ALTHOUGH the standards of points adopted in this and other countries are almost entirely drafted by exhibitors in accordance with their own ideas and predilections, and in the main refer to what is of the lesser economic importance in the total fowl, this question is of considerable importance to utility poultry-breeders, to whom the present position of affairs is thoroughly unsatisfactory, and, I firmly believe, injurious to the entire poultry industry. Such must be my excuse for submitting various considerations, in the hope that an attempt may be made to narrow the gap between those who are wholly concerned in the Fancy aspect and those with whom the productiveness of poultry is of supreme moment. I do so with a full realisation of the difficulties presenting themselves, which are indeed great. That, however, shows all the more need for approaching this question on broad lines. It may be that we shall fail to accomplish the purpose in view, in which case the only alternative will be to adopt similar methods to those recorded in my "Report on the Poultry Industry in Germany," recently published, and for utility men to draft their own standards for practical breeds, leaving fanciers to do whatever they think best in respect to the purely ornamental races. If that should be the result, it will be a reflection upon the statesmanship and common sense of poultrymen.

The present appears to be a favourable time for dealing with the question generally, owing to the proposals which are being put forth in respect to International Standards. This is no new idea. It has been mentioned many times previously. At the International Poultry Congress held at St. Petersburg in 1899 it was brought forward. Nothing, however, came of it. When approached in detail the difficulties were so great as to appear insuperable. Both prior to and since that date the matter has recurred. There can be no doubt whatever that the narrowing of the world by intercommunication has been an impelling force in raising anew this idea, and the divergence of ideals in different countries is, in some directions, checking international trade in breeding stock. Many examples as proof may be cited. There is no more popular breed than the White Leghorn, taking the world as a whole. Supposing someone, say in Japan, determined to import birds from the leading countries where the Leghorn is popular, the result would be chaos. The specimens obtained from America, Denmark, and Britain would differ to such an extent in size and prolificacy, in bone and comb, whilst retaining a few general similarities, as to be practically distinct breeds, though all supposed to be the same by the name. That cannot be satisfactory. Exhibition qualities form but a small part of the ultimate value, as exhibitors in nearly all countries, some more than others, form but a very infinitesimal moiety of poultry-breeders, and the certain tendency is for preference to be entirely in favour of the types which are most productive, not those that excel in what may be regarded as secondary qualities. Such explains why the demand for White Leghorns in the Colonies and elsewhere has passed so largely to American breeders. And, as a further result, British utility breeders of the variety named have had to import American, Danish, and even Australian birds; otherwise the practical value of the White Leghorn would have, in this country, been practically lost.

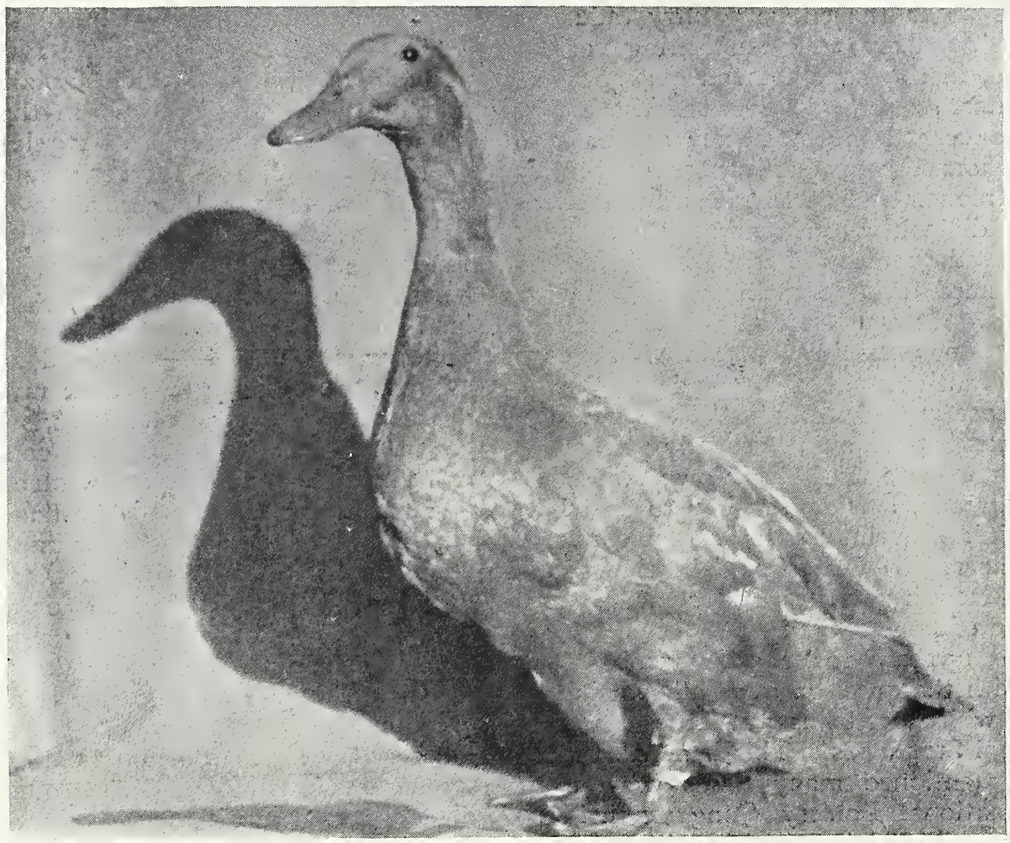
Perhaps I may be permitted at this point to express what has always been my personal ideal as to the value of exhibitions, so far as the economic races of poultry are concerned. That exhibitions have an important place is unquestionable, although their influence has been wantonly sacrificed by some fanciers for immediate and personal gain. Such ideal is that, taking breeds or varieties as they exist in this or other countries, or that may be evolved, the business of the exhibitor is to select and improve the external characteristics, thus securing greater uniformity in breeding, *within the limits of the general type of the breed.* If it is desired to alter or change the type there should be no desire to hinder that being done, so long as there is recognition of the fact that it is distinctive, and whatever results from such alteration or change shall have a different name or designation. Nearly all the difficulties which have arisen are due to a desire to retain the advantages of the old name whilst largely altering the type. Personally, I believe that new breeds are necessary and of the greatest benefit, and that these must be built on races which already exist. What we want is to avoid the use of old names for new combinations. In the early part of last century, when the Dutch or Frisian fowls were introduced and perfected, to the new breed the name Hamburgh was given, and when the late Mr. William Cook brought out the Black Orpington, he wisely gave it a distinctive name, and did not attempt to filch a designation from one of the breeds used in the amalgam.

Had others done the same, many of the present-day difficulties would have been avoided. What must be recognised is that a name should indicate one type, not several.

That one of the supreme difficulties in the way of International standards will be found in the divergence of ideals cannot be questioned, more especially in the older breeds. As examples may be cited the Brahma, which came to us originally through America, but which on that continent has been bred on totally different lines to what has been the case here. Are British breeders prepared totally to change the type in conformity with American views, or vice versâ? And, what is of even greater importance to practical breeders, is the British Wyandotte to be changed to the American standard, or will the latter be altered in accordance with English wishes? The same is found throughout the whole gamut of races. But it is a question which has to be faced if anything like universal uniformity is to be secured. With new breeds yet to be introduced the problem may be easier of solution, but would involve limitations the acceptance of which must be absolute. It has been suggested that the country in which a breed originates shall determine the standard. That, however, is not so easy as it seems. Are British and American Campine breeders prepared to abandon their own type and accept Belgian standards is a point which naturally arises. The Leghorn would not have the value it now possesses but for improvements made in America, and the same is true of the Minorca in England, as well as others that can be named. It is highly probable that ere long there will be evolved a distinctive American Orpington, resembling the English merely in name.

All this leads to the consideration whether a universal type is possible. After years of study of this subject in many countries and in connection with different species, it is difficult to arrive at any other conclusion than that such a project is not feasible. Differences of soil and climate are factors which cannot be ignored, more powerful than all the efforts of breeders. Size of body and prolificacy can be influenced profoundly by selection, breeding, and feeding, but the conditions must be favourable to the object in view, more especially in respect to economic qualities. Nature teaches us that type follows conditions, not the reverse. Darwin stated that :

> Changed conditions also act directly and definitely on the organisation, so that all, or nearly all, the individuals of the same species thus exposed become modified in the same manner; but why this or that part is especially affected we can



THE FIRST PRIZE BUFF DUCK AT LAST OCTOBER'S DAIRY SHOW AND ITS SHADOW [*Copyright.*

> seldom or never say. In most cases, however, a change in the conditions seems to act indefinitely, causing diversified variations in nearly the same manner as exposure to cold, or the absorption of the same poison affects different individuals in different ways.

And a later writer, Professor Eugene Davenport, says that :

> Plants, and animals, too, for that matter, growing in cold climates or under hard conditions, suffer profound changes, to which they become accustomed (acclimatised), and which are ever afterwards constitutional.

More than thirty years ago, I had evidence that without the constant importation of English stallions it was impossible to maintain in Australia the home standard in certain breeds of horses. At a later period, in the Congo district of Africa, successive generations of English fowls changed very rapidly, although the parents were carefully and rigidly selected. It is generally accepted that the Campine is a result of the dry sandy plains of Northern Belgium, and that the Braekel differs in consequence of being bred on the richer lands of Central and Western Flanders, although both varieties have the same origin. And that Jersey cows bred in Britain differ greatly from those raised in the Channel Islands, are larger and coarser, so much so that separate classes are provided in our shows. These facts prove, to my mind, that if International Standards are adopted there must be enough elasticity to give play to the natural conditions. Otherwise the last state will be worse than the first. I have sometimes wondered whether the success of certain exhibitors was not partially due to the fact that the standards adopted specially fitted birds bred within their environment rather than to their skill.

Recognition of what is here stated will resolve many difficulties and lead to the view that there must always be a certain amount of individuality in breeding. My opinion is that the climate in the United Kingdom tends, by its humidity and absence of excessive temperatures, to fullness of weight and to greater size than does that of other countries. Such will partly explain why in many breeds British-bred specimens are larger and heavier than those reared elsewhere, though not wholly, for there can be no question that fanciers of all grades have selected for size. What I am desirous of submitting is that each country must evolve the type most suited to itself, so long as that is a natural and not an arbitral evolution. For example, if the grey-lag goose were contemporaneously domesticated in three or four countries, as has been the case, say, in Italy, North Germany, Britain, and Russia, will the results as to size, flesh qualities, and colour of plumage be the same? Everyone who has studied this question knows that it would not be so, but that the differences in process of time would be so marked as to make each type into a distinctive breed. Such is recognised in other animals within the confines of a small country like our own. If a Cheviot sheep breeder on the Scottish border were to exchange his flock for that of a Southdown sheep farmer in Sussex, neither could hope to maintain the same characteristics and qualities as in the original habitat. The same is true with poultry. A few fanciers who desire to extend their trade in stock or opportunities for exhibiting their birds may be ardent advocates of international standardism, and no one can blame them for their aspirations, which are praiseworthy and legitimate, but their interest is not necessarily that of all breeders or of the poultry industry as a whole.

A further question arises, referred to in my opening paragraph—namely, whether a serious attempt should not be put forth to make standards representative of the fowl as a whole, not merely dealing with its secondary and less important characters. However beautiful a bird may be, however perfect in its plumage, unless it has productive qualities which make it of use in respect to food supply, its value is individual to itself and its owner and its influence practically nil. Non-recognition of that fact is where the great danger lies. That we owe much to the skill and enterprise of fanciers in the improvement of our different races of poultry even the most ultra-utility poultryman will freely admit. Without these the industry could not have made the progress which has marked the last generation. As a firm believer in the value of pure breeds and the necessity for making these the conservators of practical qualities, as well as the importance of constantly striving for improvement, I am anxious to see the abandonment of those methods which have led to a division of forces by the exaltation of abnormalities, and by exaggerated striving for what is of no value, in many cases destructive of what are the essential properties. Herbert Spencer pointed out that with the exaltation of details the consciousness of the whole weakens. Up to a given point it is evident that fanciers render the greatest service with almost every breed. In the early days, as a rule, efforts put forth are not antagonistic to prolificacy or meat qualities. It is then the breed attains its widest distribution and its greatest popularity, not alone among exhibitors, but also practical poultry-keepers. When the stage of improvement named has been reached, and competition become specially severe by reason of the all-round good quality of exhibits, is the time of danger, for then abnormalities and arbitrary points are given a weight which has no justification, and are often injurious.

One effect of the drafting of standards by fanciers alone is that the problem is approached from one avenue, and that not the more important. In the utility races productiveness of eggs or of flesh should determine the type, and not questions of colouration, &c. Nothing that has the slightest risk of being antagonistic to the essential qualities in any breed should ever be permitted to become part of its standard. If any danger exists, it should at once determine the question. Perhaps the way of progression could not have been otherwise, due to lack of knowledge. But the time has surely come when an effort ought to be made to put standards on a firmer, a surer, basis, and that these should be the outcome of a combination of such as are interested in both branches, rather than leave the work entirely to fanciers, who, in many cases, have not the knowledge or experience to enable them to make a fair, an equitable, decision. What I claim, therefore, is that in future revisions of standards, whether in this or other countries, those undertaking the work shall be equally representative of exhibitors and practical breeders, and that the general type shall occupy the determining position. To do that will involve careful study of the fowl as a whole, with a view to discovery of the meaning of certain characters. It will involve, at any rate in the utility breeds, drastic eliminations in, and alterations of, present-day standards, and relegation of points which are now regarded as of primary importance to a subsidiary position. But it will enhance the prosperity of exhibition breeders by widening their market and bringing back to them a trade they have practically lost.

How such may be brought about it not easy to suggest. It will need recognition of principles which have been lost sight of. There must be sacrifices made on both sides, but these will find even greater compensations. Proposals are in the air for holding, during the next two or three years, a great World's Poultry Congress, representative of every land and every interest. What I beg to suggest, therefore, is that meanwhile those who are bringing forward the question of International Standards shall carefully consider the pros and cons, and, if such a gathering becomes an accomplished fact, let it be thrashed out where both fanciers and practical breeders are adequately represented. Principles first and details second must be the mode of conduct. At this point the determination of principles is of the greater importance and presents the main difficulties.

Mr. E. Kellerstrass.

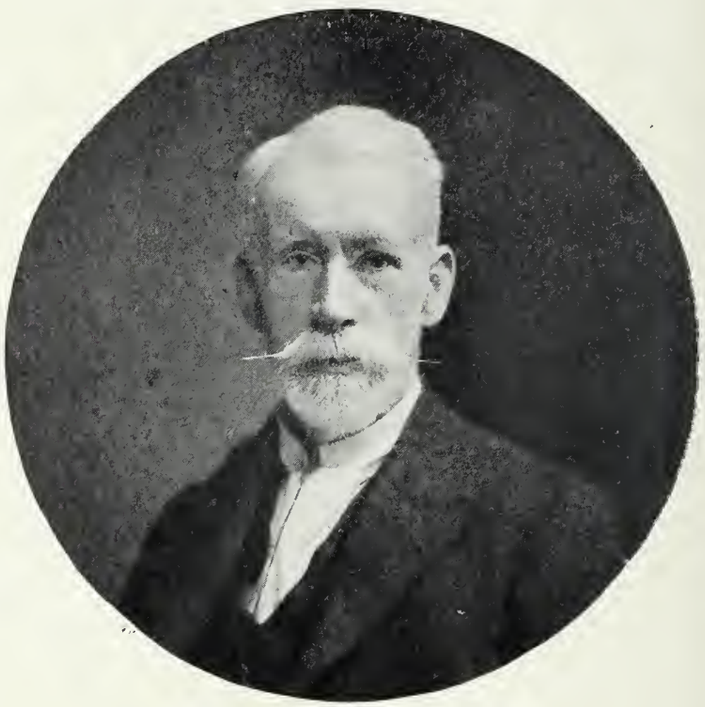
This well-known White Orpington breeder has started off on a trip around the world to recuperate after a severe illness. We do not see that he is coming to Britain, but he would be welcomed by many if he did so.

OBITUARY.

MR. PERCY PERCIVAL.

IT was only in October last that Mr. Percy Percival retired from the Presidency of the Utility Poultry Club, which position he had occupied for several years. Although all who knew him were saddened to see the evident signs of failing health, recognised most of all by himself, we did not anticipate that it would be our duty to thus soon announce his death, which took place on February 28. His later days were shadowed by the severe affliction which had come to his wife, upon whom he depended so much, and for whom his affection was so deep. As he told of this sorrow it was evident how greatly he felt for her suffering and how deeply the loss of her strong hand was realised.

From earliest days he had been keenly interested in poultry, though the opportunities of taking up the pursuit whilst he was in the Civil Service, and afterwards engaged in business, were few. Later he was



THE LATE MR. PERCIVAL.

able to take up breeding when he went to live in the country. His tastes were ubiquitous, including Game fowls and many of the newer and rarer breeds. We believe he was one of the earliest breeders of the Malines fowl in this country, and he nearly always had varieties which were hardly seen elsewhere. Whilst he might be termed a fancier, he never was a prominent exhibitor, and always kept the practical side in view, more especially as to the table qualities, and he was frequently employed as judge of dead poultry at the Smithfield and other great shows. For several years he officiated in respect to the live poultry at the Bath and West of England Society's exhibition, and he was recognised as a careful and capable adjudicator, though not on extreme lines.

Few men go through life who can claim to have roused so little animosity as Mr. Percival. His happy nature, his cheerful disposition, his dislike of enmity, and his desire always to see the best and look ever on the bright side were great qualifications, winning for him a host of friends, who one and all lament his loss. Retiring in manner, so far as public speech was concerned, he shone in conversation, and his vast fund of humour made him a delightful companion, whilst his readiness to serve his fellows, and to promote the pursuit in which he was so deeply interested, was manifest to the very last. A great gap is left by his passing away.

CROSS VERSUS PURE BREEDING.

By FRED. W. PARTON,
The University, Leeds.

WHEN properly carried out, and for certain purposes, cross-breeding has its advantages, but to be certain of ensuring those advantages a knowledge of the laws of breeding is needed, and the characteristics of the birds to be mated must be understood. When crossing is done there always should be a definite object in view, and only those birds should be chosen which are likely to attain this object.

It is a great mistake, and one to which many poultry-keepers are liable, to think that crossing is the right thing to do under all circumstances. Many do it without any apparent reason. When it is desired to improve size, or increase fecundity, or restore stamina, then, provided that the right birds are selected, any or all of these improvements may be brought about by careful crossing. In the first place, only birds in which the type is thoroughly fixed should be used for the purpose, for a two-fold reason. The potency is greater, and consequently the characteristics of the birds mated will, to a certainty, transcend to the progeny, and a fairly accurate estimate may be made of their future value. In the second place, no direct good ever accrues from crossing with any of the newer breeds, since these are generally manufactured from a mixture of older varieties, and if they are crossed with other breeds they merge at once in a nondescript type.

When signs of degeneracy are apparent, and it is desired to regain weakened constitution, and, at the same time, to retain the type, then a cross between birds of similar characteristics will have the desired result. For instance, the Black Minorca cannot be said, even by its most devoted admirer, to be a very robust breed, and it is certainly not suitable for a very cold, exposed part of the country. Yet under congenial conditions it is one of the very best of layers. On the other hand, the Leghorn is doubtless one of the hardiest of breeds, and thrives under conditions where the Minorca would not. To cross the two would at once give to the Minorca the needed stamina of which it is lacking. In this cross there is a distinct advantage to be gained, for the type and egg-laying capacity are still paramount, and yet the progeny are infinitely hardier than would be the pure Minorca. The Black Leghorn would be preferable, thus ensuring greater uniformity in the offspring, and better still if the male is of the latter breed. I recently came across a case in which the same object was attempted by using the Andalusian male with Minorca hens. While the birds were of similar type, they had the same failing, that of being delicate, and, consequently, the result was not so satisfactory. Doubtless, the progeny were to some extent stronger—a mixture of blood will always ensure that—but they were not so strong as would be the chickens of the former cross.

Another case was that of a farmer, who kept Anconas, and the egg yield was, as usual, extraordinarily good. He found, of course, that the cockerels were practically useless for table purposes, and the demand not being sufficiently extensive to dispose of them for stock purposes, he was advised to cross his Ancona pullets with an Old English Game cock, so that the cockerels so bred would be of greater value from the marketing standpoint. He carried out this advice with most disastrous results. There is no doubt that the Game fowl, either Indian or Old English, will greatly improve the quality of meat and increase the breast development of any breed with which it is crossed, but the cross in question was about the worst that could possibly have been selected. In fact, the mating of birds so diametrically opposed as the Game and the Ancona showed an utter lack of knowledge on the part of the owner. The Ancona possesses every characteristic and point that goes to make the ideal egg-producer; it is small, active, and bright; the shape of both head and body also indicate in which direction the breed is most profitable. The description of the Game fowl is the very opposite of that of the Ancona; they have not a single characteristic in harmony. There could, of course, be only one result from such a union. The Ancona blood absolutely ruined the table properties of the Game, while the Game retaliated by spoiling the egg supply of the Ancona.

It will thus be found that to make cross-breeding a success, the greatest care must be taken in the selection of the birds that are to be mated. Without proper care it is undoubtedly harmful, but when the characteristics of the birds chosen for mating are understood, and benefit can be foreseen by the combination of qualities, then crossing is decidedly advantageous.

Pure breeding, on the other hand, has many and distinct advantages. First among these is that the economic qualities, as well as the external points, can be bred for with much greater certainty than is the case when the parents are of different breeds. In cross-breeding it is always, to some extent, more or less of a gamble as to what the economic qualities will be. To the fancier, cross-bred birds are of no service whatever, since he merely pays attention to the outward characteristics. With pure bred stock improvement, when attempted on the right lines, may reasonably be expected, whereas with cross-bred fowls, they may be good, but there the matter ends, since no further improvement can be brought about, nor can the existing properties be perpetuated. This is a great advantage possessed by the pure over the cross-bred fowl. A further advantage, the importance of which cannot be over-estimated, is that the cockerels may be sold for stock puposes, at more or less remunerative prices, according to their quality. The cockerels from the cross can only be disposed of at the price for consumption, and even then it is only the heavy breeds

that are of any use in this direction. In addition to the sale of stock birds, both cockerels and pullets, sittings of eggs may be disposed of, not, of course, at the large prices that are secured by the fancier, since he breeds on quite different lines from those of the farmer. At the same time, the utility poultry-keeper, by keeping pens of pure-bred birds of good utility strains, has no difficulty in disposing of eggs at two or three shillings a sitting. If he only obtains, say, twice the price he would get were the eggs sold for consumption, he is averaging 50 per cent. more for his produce than the man who keeps cross-bred pullets.

There is a widely-expressed prejudice against pure-bred fowls in that they are very delicate, and that by breeding from pure bred stock year after year, the birds' stamina is impaired, and, consequently, there is deterioration in the economic properties. With regard to the complaint as to their delicacy, this is quite a mistaken objection, since there are pure-bred fowls quite as hardy as any cross-bred stock. It is, of course, well understood that crossing increases size and repairs weakened constitution. For instance, were some very delicate pullets to be mated with an extremely hardy breed, say, a Plymouth Rock or a Leghorn, doubtless the progeny would be considerably hardier than the mother, but it is questionable whether they would be more robust than the father.

So far as the deterioration of the economic qualities is concerned, the danger is not nearly so great as is commonly supposed. That many generations of pure-bred birds will tend to reduce the stamina is doubtless true, but if judgment is exercised in the selection of the male birds each year, and if only well grown, early-hatched birds of known good qualities are used, then the process may go on indefinitely without any apparent ill-effects. Care, of course, must be taken to ensure the birds being unrelated, since, if this is carried to excess, enfeeblement inevitably follows. How far in-and-in-breeding may be allowed depends to a large extent upon the experience of the owner, since the man of experience may carry on close breeding to a much greater extent without the same amount of detriment to size and fecundity than could the man who indiscriminately breeds from closely related stock, without due consideration being had to the relationship existing between those to be mated.

Whether pure or cross-bred fowls are preferable depends entirely upon the object the owner has in view, since much may be said in favour of both the pure and the cross. So far as beauty goes, of course, everything is in favour of purity of race, and when, in addition, the economic qualities can be maintained, the balance is in favour of pure breeds.

Fig. No. 1.—A TYPE OF AN EXPENSIVE AMERICAN POULTRY-HOUSE. **(See page 305.)**

Sorrel for Poultry.

From an interesting article on "The Poultry Industry in France" in the *Land Agents' Record* we cull the following: "Sorrel is the favourite green-stuff provided for laying hens in France, a patch of ground in the garden being exclusively set apart for its growth; the plant is always forthcoming save in the case of very severe frosts. Sorrel is accepted as having the tendency to sharpen the appetite of hens, besides facilitating digestion and stimulating the action of laying. The plant is also claimed by French farmers to harden the shell of eggs."

AMERICAN POULTRY-HOUSES.

By H. V. TORMOHLEN.

IN the October number of POULTRY RECORD I submitted an ink sketch of an ideal American poultry-house, from plans which I had originated, and which won a prize in a national contest for the best practical plans for a good, cheap house. From this article some of my British friends might be led to believe that the great number of American poultry-houses were ideal in this land of the billion dollar hen, where the speciality poultry-breeder, with his full-page advertisements and incomes amounting to thousands of dollars a month, reigns in all his glory, due to the fact that there is a sucker born every minute, and because nine out of ten people you meet

Fig. No. 2.—A VILLAGE POULTRY RAISER'S PLANT. **(See page 305.)** *[Copyright.*

are money mad, and the thoroughbred poultry business seems to offer the greatest inducement as a bonanza to the inexperienced get-rich-quick American. But such is not the case. Great bodies move slowly, and to-day, with the American hen and her products making more money for her citizens than any other product of the farm except corn (maize), the poultry industry on the farm is twenty-five to fifty years behind the times, so far as care and attention on the part of the farmer is concerned, compared with the amount of study and progress made with raising cereals and stock and hogs and sheep.

The keeping of fowls is considered the housewife's task, and altogether beneath the man's attention, by the average American farmer, who has been giving his entire time and attention to raising cattle and grain. But all the while the American hen has been neglected, shooed, and chased about as a fly or pest, while her products have steadily risen in amount of production and value, until by sheer force of arms she and the housewife have made the great American farmer call a truce, when he was confronted with figures compiled by the national Census bureau, proving beyond a doubt that the lowly hen was more of a money-maker than his sheep and cattle and hogs. The American farmer is intensely interested in anything that is a money-maker, and he can change his interests in a moment, if given convincing proof that something else beside what he has is more of a money-maker. For this reason the American farmer —the great producer of eggs and fowls for the market —is turning his attention more and more to the rearing of poultry under the most favourable and improved conditions.

The ordinary money-getting American is so egotistical in any line which he chooses to enter that it is not considered strange or out of the ordinary by the professional poultryman to have a new-comer or beginner entirely ignore his wealth. Ignoring all well-established rules for the running of a poultry plant, and observing very few of the natural laws governing the rearing of fowls, it is not such a wonder to us, who have watched the growth of the industry for several years in the States, that a goodly per cent. of those who go into the poultry business on a grand scale and on mushroom style quit it almost as soon as they commence it.

Trades and professions do not pass from father to son, and are not as settled and established as they are in England and Europe. The tradesman thinks nothing of quitting a trade which he has spent several years in learning, and immediately assuming the rôle of a clerk, travelling salesman, merchant,

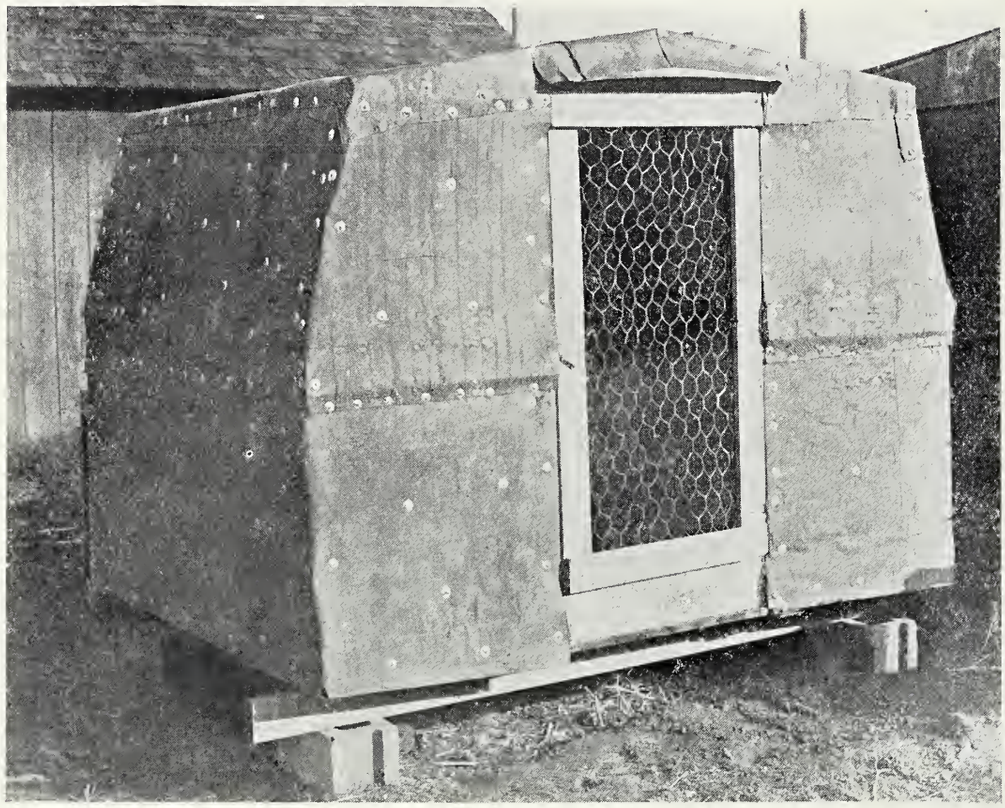


Fig. No. 3.—AN AMERICAN PORTABLE HOUSE. (See page opposite.)
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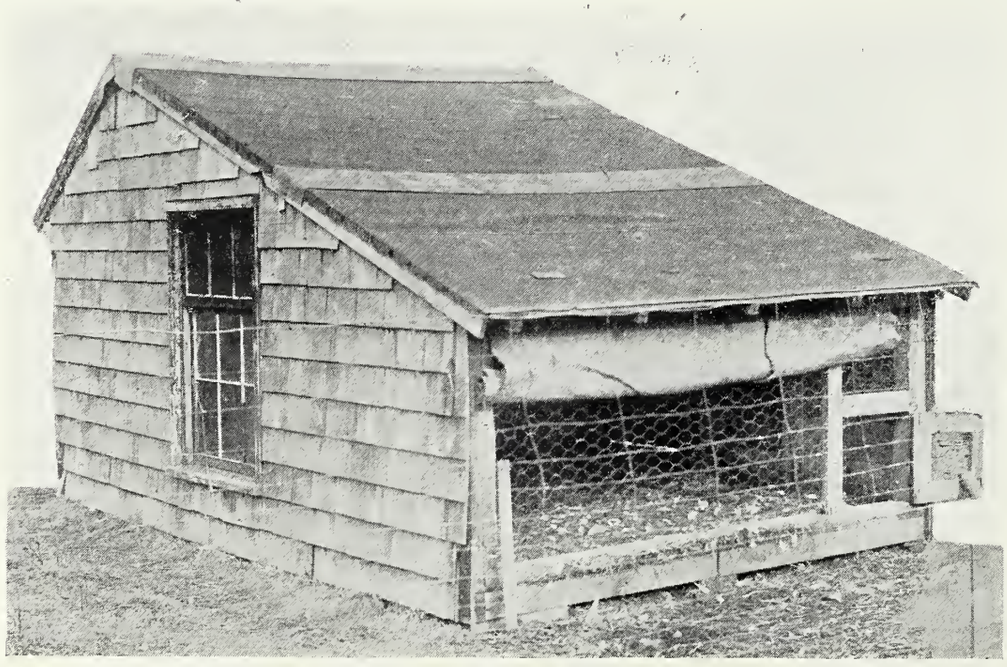


Fig. No. 4.—THE TOLMAN HOUSE. (See page opposite.)
[*Copyright.*

poultryman, or what not, that happens to strike his fancy, and seems to offer greater inducements for quick and better profits. It is said in this country that everyone must have an attack of the " chicken fever " some time or other in his life, and this is accountable for the constant changing in the personnel of the industry; it is responsible for the great number of failures of those who go into the poultry business with more money than brains and experience. The pastor of a large city church, the wealthy broker, the clerk in the city store, the office man, the village blacksmith, the postmaster, or the merchant, is just as liable suddenly to take the " chicken fever " tomorrow here in this land of the free and home of the brave as he is liable to take a bad cold. Forthwith he subscribes to ten or a dozen poultry journals, and in another month he is well launched in the business.

As great a number of the failures are due to faulty care of the fowls as to faulty housing, but unfortunately these cannot be caught with the camera in the same manner as can the house.

Fig. No. 5.—A POULTRY HOUSE WHICH PUTS TO SHAME MANY A LABOURER'S COTTAGE. [*Copyright.*

House No. 1 is about 40ft. long by 14ft. deep. It has a cement floor with cement shingles—something quite rare. The house is plastered on the inside as an ordinary dwelling-house. The owner—a well-to-do farmer, who made a nice sum from oil wells on his farm—decided to give his fowls fine quarters. The house does not have enough light through the four small windows, or any ventilation whatever. Both could be overcome by taking off 18in. of weather-boarding at the top and below the windows, and fitting in frames with canvas attached thereto. A one-slope roof would be much warmer and would cost considerably less.

House No. 2 is a village poultry-raiser's plant. A hotel or innkeeper, he lately took the chicken fever, and this is his plant. He has the fresh air idea, but the half boarded up is the roosting-room and is dark and does not answer the purpose. By having a canvas or glass window in this portion, and dropping-boards under the roosts, this half of the house would have been habitable during the day as well as the open-front scratching-shed.

House No. 3 is the portable type. It is made by taking the backs from two piano boxes and placing them back to back, filling in about 2½ft. between with the back removed from them. The whole affair is covered with tarred or roofing paper, and a wire door, single roost, and dropping-board completes it. This house is used as a breeding-house for a small pen of fancy fowls on poultry farms, and later in the season is used as a colony-house, being pulled out into the fields. This house is so simple with its open front that it answers the purpose well.

House No. 4 is a Tolman house, named after the originator, and very widely used in this country during the last five years.

House No. 5 is a very comfortable and substantial house. It is built of hollow red burnt tiles. It has two sliding doors on the south side, as seen in the picture. On nice days these doors are rolled back, admitting an abundance of sunshine and fresh air. The two windows in the doors admit plenty of sunlight on bad, stormy days. This house forms a pleasing sight, with rambler roses covering most of the end and a part of the roof and fences. This house is on a suburban five-acre tract devoted to gardening, orchard, and poultry farming—a very profitable combination.

American Poultry Association.

Efforts are being made to secure the next meeting of the A.P.A. at Nashville, Tennessee, during the coming summer, and the Southern men promise a hearty welcome.

THE ROTATION OF PRODUCTION.

By J. W. HURST.

FOWLS.

Hatching operations are still in full progress, more particularly where pullets of the light breeds are required, and it is not improbable that more Leghorns will be reared this year as a result of the fine performance of a pen of Whites in the Southern Laying Competition, which concluded in February. Much more attention might with advantage be devoted to the development of utility strains of this variety, but any attempt at a specialists' boom would have to contend with the white shell prejudice. All earlier hatched chickens should now be hardened off as soon as possible, and the more forward, that have passed through the cold-brooder stage, may be placed out with their night-hutches further afield. The season is sufficiently advanced to make foraging as profitable as it is health-giving, and the difference in the rate of growth and development becomes more conspicuous week by week. The laying stock, as well as the growing birds, must be encouraged to range the open fields, and their dietary regulated accordingly—quantity may be gradually reduced in the rations, and less heat is required in the morning mash. The bulk of the grain allowance should consist of oats. In addition to the hatching for stock purposes, and, as far as may be, filling the blanks due to earlier possible misfortunes (many having been troubled with a large proportion of infertile and addled eggs this year), as many more eggs of the table sort should be put down as occasion serves, to keep up the supply of marketable chickens.

DUCKS.

Concurrently with the rearing and marketing of the ducklings raised for table, some attention must now be given to possible laying requirements in this department. A duck's egg is not everyone's choice, but in some centres of consumption there is a sufficient demand to encourage a larger production, and, with an increase in the output of Indian Runners' eggs, it is probable that the demand would be greater—the distinctive flavour of ducks' eggs, to which some object, being less pronounced. This is the month in which to put down for incubation the eggs of this breed, for the provision of the winter laying stock. The young are as easy to rear as any others, and should be treated in the manner already suggested for raising stock ducks; but it is not advisable to stock this breed unless the available range is sufficient and suitable for their active foraging habits and needs. Where the conditions are favourable their prolificness will much more than repay the relatively small amount of feeding and attention they require when reared.

GEESE.

Incubation should be continued, and as many eggs set during the month as are available. The earlier-hatched goslings should be separated from the hens as soon as possible, and afforded full opportunity for grazing, but they must be prevented from wandering too far from the homestead. When the requirements are sufficiently provided for by the number of eggs set under common domestic hens, it is advisable to let the geese sit on their own eggs as soon as they show an inclination to do so. Any eggs that may be produced subsequently, and too late for incubation, can very well be used in the house.

TURKEYS.

As far as egg-production and incubating success have made it possible, this should be the chief hatching month, and the rearing of a goodly proportion of young turkeys should have commenced before its close. There is no inherent difficulty in rearing turkeys provided they are the progeny of sound and mature stock. The chief essentials to success are correct and frequent feeding and reasonable precautions against wet. In their earlier days particularly it must be remembered that they are constant rather than large eaters, needing food of good quality frequently, but not much at a time. At the commencement of feeding (about twenty-four hours after hatching) they should be fed about every two hours—until they begin and are able to search for food for themselves. Eggs may be used in early feeding, but not hard-boiled. Rice should be boiled in milk with eggs broken and stirred in during the cooking of the former, this being subsequently dried off by the addition of fine biscuit-meal (previously scalded) and oatmeal or fine middlings. A better diet, however, is that long used by many rearers of experience, consisting of milk curds and fine oatmeal. The caseine in the form of curds may be obtained by heating milk and adding a little rennet; the action of this is powerful, and the curd forms in about half an hour. For green food onion is usually recommended, and nettles, lettuce, mustard and cress, &c., may be given in addition, but the most satisfactory is the dandelion.

"THE PLYMOUTH ROCKS."

THE sixth edition of a book entitled "The Plymouth Rocks" has recently been published by the *Reliable Poultry Journal*, edited by W. C. Denny. It treats of the practical qualities of standard-bred Barred, White, Buff, Silver Pencilled, Partridge, and Columbian Plymouth Rocks, giving standard requirements, based upon the latest American standard of perfection. Some of the best known and most expert Plymouth Rock breeders in America have contributed to this book, telling how to judge, mate, and breed the different varieties for best results. The subjects of line-breeding and of single and double mating are carefully handled. This book is fully illustrated by F. L. Sewell, A. D. Schilling, I. W. Burgess, and H. G. Froby, and contains full-page pictures in natural colours of the Barred, White, and Buff varieties, reproduced from Sewell paintings.

Poultry in Ontario.

The annual provincial returns show that on July 1, 1910, there were 12,460,787 poultry on hand, of the value of £1,078,606, an increase in number of 374,207 and in value of £196,329. During the year ending June 30, 1910, there were sold or slaughtered 4,164,715, valued at £422,843, a decrease in numbers of 12,868, but an increase in value of £32,628.

SOME THOUGHTS ON REARING.

THERE are very many people in this country who, for various reasons, do not go in for rearing-sheds or any such special contrivance for the protection of their early chickens from wet and cold. And these people belong to the largest class of poultry-keepers in the land—namely, the farmers and peasantry. It may be urged that any system of rearing in the open is not to be encouraged, that it will pay in the long run to build sheds, and so on. But that I do not intend to discuss here. We know that an enormous number of early chickens *are* reared in the fields, farmyards, and orchards, and that the mortality is possibly very great. We may be quite sure, too, that this old-fashioned way of rearing will continue in vogue for a good many years yet. Therefore, without questioning the sanity of the method, without recommending a better one, I would here offer a few hints as to how the open-air rearer may best combat the elements and make a success of his undertaking, being convinced, as I am, that his intentions are good and deserving of the highest encouragement.

As most of the rearers I refer to still " stick to the old hen," she, as a time-honoured institution, may be considered first. Possessed as she is with an overflowing anxiety to find food for her brood, she must, in the first place, be cooped to check that wandering instinct of hers, for there is nothing that increases the mortality list faster than the effect upon the chickens of being led about in all weathers, a draggle-tailed, cheeping crew at the rear of an over-anxious mother. A winter coop should be of stouter make than one used for summer, and as well as having wide eaves and a good weather-board in front, it must stand on a floor raised an inch or two from the ground. A detachable run, with wooden sides eighteen inches deep, and a fine-mesh wire top, is necessary, and it should be the same width as the coop, so that it can stand immediately after the latter; and it should be not less than four feet long. Eight to ten feet is a convenient length. The object of this arrangement is to provide a place in which the chickens can feed and exercise on the open ground, while they are protected from vermin by the wire above and from cutting winds by the wooden sides. If there is much fear of attack by rats in the daytime the under part of the run may be wired also, but if this can be avoided the run will be obviously much better for the birds' feet.

The coop must, of course, be placed in a sheltered situation, on the driest possible ground, with its back to the prevailing winds, and where it can get all the sunshine there may happen to be. The litter is a most important item, and it does not matter very much what it is so long as it is short, dry, and clean. Peat moss, of course, is excellent, but, failing that, chaff will do, or the husky refuse left by the threshing machine. Shavings are useful and warm, but sawdust is not desirable, for the chickens are liable to eat more of it than is good for them. Whenever the litter gets wet, either through leakage, or rain, or drifting snow blowing in at the front of the coop—though a good weather-board should prevent most of this—it must be renewed, and it is just as important to keep it clean by removing the old and giving a fresh layer when necessary. The coop and run should be moved twice a week on to fresh ground, and this latter should not consist of long grass. If the turf is not short and well drained, hard gravel, such as garden path, is infinitely better. In this latter case, or even when it is on the best of turf, if the weather is very severe, the run is best strewn with chaff, which will keep the chickens' feet off the cold ground and provide material in which they may scratch for a sprinkling of dry food.

This latter is the greatest boon ever invented, or popularised, to the chicken-rearer in general and to the open-air early rearer in particular. With it he can keep his youngsters employed, he can give them means of diversion and get them to exercise themselves in even such a small space as the run I have mentioned. Yet it is not everything. I would never advise the rearer, at this season, to put all his trust in " dry food." The chickens, if they are to thrive, if they are to be fortified against the inclemencies of the season, require also something of a softer nature that will assimilate quickly. There is meat, for example. These " early birds " must have their " worm " in one form or another, and as nature does not go out of her way to supply the worm itself, we must provide the substitute. Some " dry feeds " contain meat, if the term may be used, in the form of " dried flies " and " ants' eggs," but, candidly,

REARING ARTIFICIALLY. [*Copyright.*

I do not personally consider these articles of diet really of much greater feeding value than their names would seem to imply. " Dried flies " as an entrée, with " dry feed " to follow, sound very dry indeed, and experience teaches me that any of the granulated meats give better results, and " green bone " (used very carefully) best of all. But the cottager or farmer does not usually go in for these articles. Perhaps he has never heard of them, and if he has they do not always, by any means, find a place in his feeding menu. Nevertheless, I would persuade him, if I could, that meat of some form is really essential to ensure the best success with early rearing, and if it is necessary for chickens who always have a roof over their heads, how much more necessary must it be for those who are exposed to much of the weather? If he cannot or will not go in for prepared meat, butcher's scraps are an excellent substitute, and a little granulated or minced suet in hard weather

ON AN IRISH PREMIUM STATION.

[*Copyright.*

makes a wonderful difference to the young stock. There is one article of food, however, which comes in the farmer's way, and which may take the place of meat, and that is milk. With a good supply of this the rearer need not worry about meat at all, for the milk will take its place, and in its use there will be far less risk of the inexperienced making mistakes, as he is liable to do with serious consequences when using " green bone " or meat. I once saw a batch of chickens reared most successfully upon crusts and stale bread soaked in milk, and green food. They only had a cucumber frame, placed on grass, for a run, and a home-made brooder of most primitive type at one end for a sleeping place. Yet they did well, far exceeding everyone's expectations. The same rearer, who had a taste for experiment, tried feeding on bread soaked with boiling water, then mashed up with some beef dripping and left to cool, but the results were not quite so satisfactory. Looseness of the bowels was more or less prevalent, and the chickens were not as robust as those which lived on the bread and milk. Next to this latter I would recommend rice boiled in milk and stirred crumbly with white thirds or fine oatmeal for outdoor early rearing. Chickens are very fond of this food, and its starchy nature, under these conditions, is rather an advantage than otherwise. Linseed might be used more largely in conjunction with dry food at this time of year also, and finely kibbled maize (the flat kind) is an excellent grain for the chickens which are big enough to swallow it. Maize-meal, which is in such every-day use now on farms, should never be fed to chickens in the raw state, but after well scalding and cooling it makes a useful change of food if mixed into a friable consistency with middlings. There is only one other article of food of the many which might be recommended here that I shall draw attention to, and that is the onion. If this vegetable were used more largely by rearers we should not hear so much of " infant mortality " in the chicken runs, nor of gapes, diarrhœa, and many other diseases. Not only is it a health-promoter as a vegetable, but it has a high feeding value, it is warming to the system, and, what is very important, it is cheap. Onions are best fed in the raw state after being chopped or passed through a mincer, and they may either be given with any soft food that is going or fed separately. Chickens will eat them greedily any way, and their value cannot be over-estimated. A. T. J.

APRIL NOTES FOR AMATEURS.

HATCHING operations are later than I have known for several seasons, and comparatively few amateurs were able to make a start early last month, so that there will be all the more to be hatched in April. This will not be too late for winter laying pullets if we are favoured with a real summer, and chickens of the heavier breeds, such as Orpingtons, Wyandottes, Rocks, &c., may be hatched up till about the end of this month with a reasonable chance of getting the pullets to lay by November. For the quicker growing, smaller breeds this is the best month of the year for hatching, and April pullets frequently commence laying in September and October. Therefore push on hatching operations as rapidly as possible. It is better not to have broody hens about in the warm weather of May and June, when insect pests are so abundant that it is difficult to keep the nests free from them. Besides, the later hatched birds do not thrive and grow at the same rate as those which make their appearance in the bracing month of April.

Those who use incubators of the hot-water tank type must remember that as the days become warmer and the air drier, it is necessary to keep more moisture in the water tray. At the beginning of this year, and up to the first week in March, the atmosphere was so humid that one could work an incubator dry right up to the last three or four days, and in most cases better results were obtained in this way. But one has to take the surroundings into consideration. In a cellar, for instance, little or no moisture need be added, whereas in a warm, dry room it is necessary almost from the very beginning. In working an incubator one must always study the conditions, and not adopt any hard-and-fast rules.

When the ground is dry, as it should be by this time, it is better to dispense with floors in the

chicken coops. Unless plenty of litter is provided they are a frequent cause of cramp, and at this time of the year there is nothing better for chickens than the soft, springy turf. But the coops must be moved at least every other day, or the ground becomes fouled, and the grass may be so worn that it takes a long time to recover. By the way, no one need be afraid of rearing chickens on a lawn if the coops are moved every day. I find the grass grows better after it, and my lawn has been considerably improved since I have had a few coops on it in the early spring. A piece of wire-netting stretched on the bottom will effectually prevent the hen from scratching holes in the turf.

A word to breeders. Do not keep the same cock in the breeding-pen all through the season if you can help it. You may have noticed that when one cock is kept at work all the time, the rate of fertility begins to show a slight falling-off about this season, which is a sure sign that the male bird could do with a rest. It is not everyone who has the convenience to keep two cocks for each breeding-pen, but it is certainly a wise precaution to have a male bird in reserve when fertility is desired.

Some thousands of day-old chickens are sold about this time, and many of my readers may prefer to buy some in preference to hatching their own. In that case one has only to turn to the business columns to find them advertised in all varieties and at all prices. They are sent off in boxes as soon as they are strong enough, and before they have had their first feed, and the buyer should have broody hens ready and waiting for them. The vendor will give notice when they are being dispatched, so that they may be met on arrival and introduced to the hens without delay. Any hen that has been sitting steadily for a few days will take to the chickens without any fuss, and after brooding them in the nest for a few hours, the hen and her charges may be moved to a coop.

To keep the earlier chickens growing it is desirable to move them on to fresh ground, and as soon as they are well feathered and the weather is moderately warm the mother hen should be taken away. Let them sleep in a well-ventilated house well bedded with peat moss or some other litter, but without perches, and get them out early in the morning, when there is usually plenty of insect life about at this time of the year. Fresh ground acts like a tonic to young stock, and rearing is never so satisfactory when one has to keep the youngsters continually on the same ground, or move them on into pens that have been occupied by other stock. That is why I advise amateurs who are short of accommodation to curtail their rearing operations, because in the case of ordinary market stock it is questionable whether it pays when the conditions are so unfavourable for growth.

Belgian Breeds.

A Society, on co-operative lines, has been formed to organise and promote the export and sale of Belgian breeds of poultry, for which there is a large and increasing demand at the present time. One object is to defend the purity of races and the maintenance of the original type.

THE SPRING CHICKEN.

By WILFRID H. G. EWART.

THERE are more sorts of spring chicken than one. There are three sorts. One kind we may observe in poulterers' shops as we walk about the streets —that is the kind most commonly meant. There is the spring chicken of the earliest poultry shows now shortly to be in season—and that has probably been more talked about than any other class or description of fowl. And the third kind of spring chicken is the common or garden "thing" of the countryside—something which we may knock down or destroy in our motor-car without much compunction, for it seems to be so ubiquitous, and therefore so insignificant.

It is of that last-named sort I wish more particularly to write, for it is certainly the most important of the three and the least understood. A man who tries to rear the spring table-bird must take pains or his produce will not sell; the fancier cannot hope to win prizes unless he brings on his youngsters as rapidly as possible under first-rate conditions. But the ordinary farm chicken HATCHED in the spring—what matters it? Our national shortage of eggs and the failure of poultry-keeping on many a fine farm are largely due to inadequate encouragement and attention on the part of farmers.

"They seem to grow, anyway," you say. Yes, they do, and that is because they are reared upon the principle of the "survival of the fittest." But think for a moment what a sum of energy is required to win through eight months of squabbling and striving in the farmyard, chased and chivvied by elders and betters. In the upshot we get something strong and hardy, admittedly, but naturally reduced both in mere bulk and in capacity for reproduction. The life of the farmyard, precarious as it often is, proves almost as great a stumbling-block to prolificacy as the indiscriminate character of breeding and of breed.

Probably the capacity required to struggle through is wholly under-estimated. It is, in fact, a source of strength inherited from environment, not less than from an ancestry which has suffered likewise. I have before me my own experiences in regard to fertility and free range on a farm. Last season my breeding-stock had free range over meadows and into yards—admittedly they were well fed and well tended—and the degree of fertility was a hundred per cent. Now, with a more refined stock more scientifically managed, but confined in breeding-pens twenty-five yards by twenty, I do not think I ever achieved a higher fertility than eighty per cent. Upon the farm there was not an unfertile egg throughout the entire season—all were dark and strong and lively.

What the average farmer does not understand is that by better methods—if not by better stock—the same result of pre-eminent utility can be attained in combination with far more profitable qualities. Let us look at some of his mistakes in rearing—for is not rearing the basis of good poultry-keeping? The coops are seldom sound and up to date. A good start is the most important point in all rearing; thus, if there are draughts and damp, one cannot expect a sound foundation for quick growth. What is wanted on a farm is a broad, rather low type of coop, very stoutly put together, roof coming well over front and back,

half the front only slatted, the rest protected; a well-fitting removable floor, with two 2in. by 1in. battens projecting at least a foot fore and aft, by which means they can be easily borne about.

This month many farmers will be getting their birds out of the coops—into what? Into some hideous farmyard den full of filth and vermin and vicious cocks and hens. He will, in fact, be relegating them severally to the common purposeless lot. Now, when chickens are six or seven weeks old and fresh from the hen, you cannot afford to expose them to the vagaries of an English spring. They should be placed in a sound, warm house, duplicating as far as possible the conditions to which they have grown accustomed. I do not so much like a colony-house for this purpose as a low, well-built shed opening by a lid in the roof, having a netting-covered aperture high up in front and a thick floor. The colony-house on wheels, though ideal for laying and breeding stock, has been responsible for many deaths among young chickens, since at night they will often creep underneath between the wheels instead of climbing the ladder; but with the other place they have only to walk in at the trap-door, crowd together at the further end, and be thoroughly warm.

After all, though, the great stumbling-block is the separating of the spring chicken from the hardened fowl—that essential measure which scarcely one farmer in ten appreciates. The coops should be located, if possible, in the orchard, but not if their occupants will be interfered with by raiders from the farmyard. Many a good rearing site is spoilt this way. A young fir or larch plantation will do nicely, so the grass be kept fairly short. The southern side of a good bank and quickset hedge may do if no other suitable position can be found.

The sorting of the stock—so necessary at three months—always provides new problems on a farm. You see, it means a division and sub-division of flocks, and that is no easy matter where wire netting is non-existent. Particular methods must be suited to particular conditions. But it can be laid down that the chickens must be kept away from the farmyard until they are eight months old.

I have dealt at some length with those questions of housing and situation because they are primary conditions. Greater stress might be laid upon feeding, but I am not of opinion that this is at all the worst side of the business for the first six weeks. The torture of a peppercorn is not inflicted on the unfortunate chick as it used to be in days gone by. The common diet is the old-fashioned egg and bread-crumbs, minced meat, rice and milk, and, believe me, there is none better for the first ten days. After that something altogether more substantial is required—very fine biscuit-meal scalded and left to soak all night, then mixed and kneaded between the palms of the hands to a light paste. One might give this twice a day and a good dry food four times for the first six weeks, taking off one meal after the first month. It is after that month, and especially when the chicks have left the hen, that trouble comes. Henceforward, as a rule, they have to find a great part of their own living—not such a difficult task if the birds are properly placed, but this is seldom the case. House them in the lee of some corn-stacks and they will pick up much good fare, especially at threshing time. Soft food, however, is what they want. Give them, therefore, twice a day scalded biscuit-meal mixed with ground oats and sharps. During April and May they will also want two feeds of corn—nice round clipped oats or strongly sifted chicken wheat. Gradually reduce this until the time when the hay is off and the birds can be moved into the meadows. After that all is more or less plain sailing.

One matter of urgent importance which is almost invariably neglected is the separation of the sexes.

BLACK ORPINGTON PULLET WHICH WAS SOLD FOR £60. [*Copyright.*

We see cocks and cockerels, hens and pullets mingling unnaturally together, and that, of course, is a factor diametrically opposed to proper development. The spring chicken—especially of the lighter breeds—peculiarly inclines toward a precocity which the utterly ignorant mistake for rapid growth. The cockerel which crows and besports a comb at three months is no less than a wastrel, and so as a rule is the pullet which lays at four months. To my mind the value of the former is practically nil, while the latter will produce half a dozen very small eggs and moult.

Then there is water. The farmer, with all his care for stock and his knowledge of its requirements, leaves his poultry to forage for one of the first necessities of life and find it if they can. Mention of that brings mention of gapes. Once found on a rearing-ground, they are almost impossible to speedily eradicate. The sure preventive, however, is fresh land, and, above all, fresh water, which should be kept always before the birds in clean, shallow troughs. Given this, its freedom, and good fare, and the spring chicken will not only repay, but offer interest at a high rate.

FANCIERS AND FANCY MATTERS.

By WILLIAM W. BROOMHEAD.

Mr. Robert Butterfield—"Teamsters"—Continental Fancy Fowls—Belgian Bantams—P.C. Breeds Cups—Blue Orpingtons—The Dubbing of Fowls—The Rosecomb Rock—The Black Orpington—Yokohamas—The Fancy in Scotland.

MR. ROBERT BUTTERFIELD.

One of the oldest breeders of Plymouth Rocks in the Fancy to-day is, I believe, Mr. Robert Butterfield. For several years he resided at Nafferton Hall, Yorkshire, and while there he won many hundreds of prizes with his favourite breed. During recent times I have missed his name from the show lists, and I thought that he, like many another good fancier, had got "tired of the game." I am glad to hear, however, that this is not the case, and that he is still actively engaged in the Fancy. He has recently taken up the post of manager to Mrs. Harry Jones, of Long Lane, Etwall, Derbyshire, and he tells me that at the Vicarage there is a big stud of valuable birds. Among the breeds kept there for exhibition purposes may be mentioned Barred Plymouth Rocks, Buff Orpingtons, and Leghorns, and up to date some very promising chickens have been hatched. If all goes well, therefore, we may expect to see some of the Long Lane teams at the early exhibitions, since no one knows better than Mr. Butterfield how to bring chickens on for the shows, and, what is perhaps more important, how to stage them in fit condition.

"TEAMSTERS."

At times much is said of those exhibitors who, viewing the Fancy from a strictly commercial aspect, "invade" our shows with teams of birds and "swamp" the classes. Without actually looking up the figures, however, I think it can be safely said that seldom, if ever, has a fancier in this country gone to the length of making fifty entries at any one show. But how do the teamsters figure in other countries? At New York Show last year, the Owen Farms—the largest exhibition poultry farms in the United States of America, if not in the world—had 223 birds entered at that event, and it was an "eye-opener" to some of the English fanciers who were at the Madison Square fixture. Sure, it was a great team. But I have seen that record beaten this year. At the annual international exhibition of the Royal Avicultural Society of Belgium, held at Brussels on February 17, 18, 19, and 20—at which show I had the pleasure of awarding the prizes in some of the classes for Orpingtons—I found one exhibitor (Mons. A. Vroome, of Jette) with no less than 308 entries to his credit. This important Belgian fixture, moreover, appears to be a happy hunting ground for the teamster, and it is interesting to note that those entering more than a score of exhibits were the following: Ferme du Grubbe, 206; M. Paul Monseu (president of the organising committee of the society), 132; V. Pulinckx, 122; Geo. Lamarche, 90; L. de Hemptinne, 89; M. Van Gelder, 82; Mme. de Burbure de Wesembeek and R. Dujardin, 59 each; L. Deschryner-Lobelle, 55; L. Pirard, 52; Van Herendael, 47; Madame P. Lambrechts, 41; Aviculture d'Oplinter, 39; Mlle. S. de Smet and J. Denis, 37 each; A. Godts, 35; C. Bernard Blanquart and A. Colle, 32 each; J. B. Kuypers, 29; P. de Klerck, 27; M. Schaetsaert, 25; and J. Van Loon, 21. Few teamsters had entered at Brussels from this side of the Channel, but those English fanciers who were represented were Messrs. C. Britton (Great Longstone, Derbyshire), with 11 entries in Leghorns, Wyandottes, Orpingtons, and Plymouth Rocks; J. Edwards, jun. (Hereford), a couple of Campines; G. Holdsworth (Wolverhampton), a Blue Wyandotte cock, the only entry in its class; C. J. Milligan (Belfast), a dozen pigeons; A. G. Pitts (Somerset), Andalusians and Minorcas, nine entries; K. Pearson (Plymouth), a Braekel cock; and J. Pennington (Cheshire), a couple of Barred Plymouth Rocks. At such a show as Brussels, where the prize-money is given according to the entries in the class, it would scarcely pay "fares and expenses" in most cases to send birds over. Nevertheless, the few English fowls I did see, and more particularly Mr. Pitts's Minorcas, stood so far ahead of others in the classes that they were somewhat easy winners.

CONTINENTAL FANCY FOWLS.

I have said that the birds entered by English fanciers at the late Brussels Show were somewhat easy winners in their respective classes. This was perhaps not so much a question of general excellence as regards what may be termed "standard points," but rather a matter of show condition. The quality was there right enough, in that the exhibits in the several breeds and varieties were as near their standards of perfection as are the bulk of those shown in this country. But, if I may be permitted to say so without any offence—I trust that my remarks will be taken in the right spirit—most of the large fowls penned by the Continental fanciers at the great Belgian event lacked the finish one sees in fancy poultry in competition at our fixtures. One thing that struck me forcibly was the prevalence of a disease known as "scaly leg," and other Englishmen at the show remarked it as well. In several cases, too, the plumage of the fowls was rough and dirty, just as though the birds had been picked off slum runs and penned without any preparation. Let me admit at once my ignorance of the conditions that prevail in Belgium and other Continental countries for the keeping of poultry on fancy lines. When on my visit I had not time to inquire into this. It is quite evident, however, that the Fancy across the Channel has not developed to anything like the extent that it has done at home. Nevertheless, in connection with the late Brussels Show not far short of a thousand classes had been scheduled for poultry; hence it is reasonable to conclude that the fancy element is there. It may be said that over there the utility side of poultry-keeping is the all-important one. Admittedly, but this section of the Belgian exhibition—that for eggs and table-poultry—was a rank failure! As regards the fancy section, it was just a question of condition. And it is no exaggeration to say that the majority of the large fowls penned in the Cinquantenaire Palace in February would have been passed for condition alone had they been judged from an English standpoint. After all, however, it

is not a difficult undertaking to amend matters, since, as has been said, the quality is there.

Belgian Bantams.

So much, then, for a mild criticism. I must say that throughout the Bantam section things were quite different. Here the keenest among us could not find a flaw. Not only were the Bantams of very high quality as regards type, colour and markings, but one could see at a glance that particular care had been taken in preparing the birds for the show bench; and the whole section reflected the greatest credit on the Belgian Bearded Bantam Club, under whose patronage the Bantam show was held. The Belgian fanciers are great on their Barbus Nains, and I was very much taken with these quaint little Bearded Bantams. The range, too, is a wide one, since nine distinct varieties (or colours) of the d'Uccle and d'Anvers were on view. These were the Mille Fleurs (very similar in colours and markings to our Jubilee Orpingtons), Porcelain (delicate blue spangles with clear white tips on a light buff ground colour, and a decidedly charming combination), Spangle (black with white ends), Black, Blue, Cuckoo, White, Quail (rather like the Brown Sussex, the hens somewhat resembling the Wheaten Game in colour and with regular markings), and Ermine Buffs (rich buff colour with black ticks or stripes in the neck-hackle, and black tails). Perhaps the White reminded me of whiskered White Booted Bantam occasionally seen in this country, but more of a Cochin type and setting. However, the Bearded Dutch is an excellent breed, and in my opinion quite worthy of attention among our "bantamites." It may here be mentioned that Mr. Ernest Davies, well known in South Wales Bantam circles, has secured a pen of Quail Barbus d'Anvers from Mons. Paul Deucuet, and, since the birds are excellent layers, he anticipates raising a good flock of them this season.

WHITE LA BRESSE COCKEREL.
By courtesy of G. H. Caple, Hon. Sec. of the La Bresse Club.

P.C. Breeds Cups.

Those members of the Poultry Club who compete for the breeds cups should mark well that in future these cups will be granted only to such shows that

are open to all members of the Poultry Club, or rather—and there may be a slight difference—that they " be only granted to shows where all members of the Poultry Club can compete for them," to quote the official report. This is certainly as it should be, and the cups should never have been offered otherwise. I have always held a strong opinion on this point, and I have not failed to air it on more than one occasion. Some of the cups have been won outright, and, in one case at least, most, if not all, of the wins on the cup were secured where the competition was very poor indeed, and more than once where the winner was the sole competitor for the cup. This, to say the least of it, was scarcely cricket. However, under the new conditions, to win a cup outright will not be such an easy matter, and I feel sure that it will result in much stronger competition.

BLACK LA BRESSE PULLET.
By courtesy of G. H. Caple, Hon. Sec. of the La Bresse Club.

Blue Orpingtons.

At the general meeting of the Blue and Cuckoo Orpington Club it was stated, among other items, that the Blue is a laced variety, similar, it may be added, in colour and marking, to the Andalusian and the Blue Langshan. Some fanciers appeared to be under the impression that what is termed a " whole " blue—like the Blue Wyandotte, for instance—was the correct thing. And in fairness to them, it must be added that some confusion was caused by the secretary of the club issuing a coloured plate depicting the birds devoid of lacing. However, it was explained that the artist was responsible for the mistake, and that the Blue Orpington must be a laced variety. A strong point, too, is made of the colour of the eyes, which must be black or very dark brown, black being preferred. By the way, on his visit to the United States of America, Captain Max de Bathe, of Hartley Court, Reading, caused quite a sensation at New York Show with his team of Blue Orpingtons, and he did not take the whole of his champions with him either.

The Dubbing of Fowls.

Signs are not wanting that the dubbing question is coming to the front once more. There has been a

recent prosecution and a more stringent act dealing with cruelty to animals has been passed, hence the N.S.P.C.A. looks as though it were on the war-path once more. There are arguments for and against the practice of dubbing fowls, not only Game but some of the large-combed breeds of the non-sitting class. But, although, according to a High Court decision, delivered some thirty-five years ago, dubbing is illegal, it is time that the ruling body of the Fancy, the Poultry Club, brought a test case before the highest tribunal in the land and got it settled once and for all. I must say that if the operation is skilfully performed there is no cruelty in it, and I once witnessed a well-known Game breeder dub some cockerels in less than a minute each, the birds on being put back in their runs behaving as though nothing had occurred.

The Rosecomb Rock.

I see that an authority—on certain matters appertaining to the Fancy—has been indulging in a " dig " at the Rosecombed Barred Plymouth Rock, the " new " variety that caused some controversy in the Fancy Press a year or two since. It appears that an application has been made to admit it into the American Poultry Association's standard, and if the applicants can persuade the council of that club to recognise it the Rosecombed Rock will be exhibited in America in two or three years' time. And, why not? The Single-combed Partridge Wyandotte is standardised by the A.P.A. as a Partridge Plymouth Rock, as is also the Columbian, to mention only two varieties. We hear much of the confusion it would cause to distinguish between the Rosecombed Barred Rock and the Cuckoo Wyandotte. But, really, where *is* this latter variety? How many Cuckoo Wyandottes have been exhibited either here or in the United States of America these past three or four years? To all intents and purposes it is a dead variety, and when it did live its existence was not a brilliant one. Moreover, as I have said once or twice in these notes, there is a vast difference between Cuckoo and Barred, as these varieties are now bred. The Rosecombed Barred Rock has nothing against it, and I speak from personal experience. It is a first-class " all-rounder " in the utility line, and those enthusiastic fanciers in this country who have it in hand are gradually improving their stock as regards colour and barring. The authority who has brought it into prominence once more—though not in the manner he intended—" would rather see even Partridge and Columbian Rocks than the Rosecombed Rock added to the list as a Rock," although he does not advocate the creation of a new variety simply by changing the headgear. Just so, but others think otherwise and time will show which will win.

The Black Orpington.

I was pleased to read an article in a contemporary on the Black Orpington. In his remarks the author states that it is the best variety with which to start in the Fancy, and that it offers a better investment for capital than any other fancy fowl. Some of us who know the Black Orpington of to-day—the exhibition stamp, that differs in very few points indeed from the Cochin—may fail to see the force of such statements, but it must be added that the case for the Black is put in an able manner. For instance, to say that " the cost of rearing them is no greater than would be the case if any other heavy breed had been chosen," is, well, not exactly my experience with the Black. I have found that, compared with the Buff, the White, the Jubilee, and the Spangled—to mention other varieties of the Orpington only—the cost is very much greater, in that it is the slowest growing branch of the breed to come to maturity, either in the matter of getting the cockerels fit for the table, the pullets into laying form, or either sex ready for the shows.

Yokohamas.

Although not much is heard of the Yokohama, in that those enthusiastic fanciers who breed it are somewhat backward in " booming " it through the usual channels, it is pleasing to note that the breed continues to make steady progress. Since the club was started in 1907, the Yokohama has been prominently before the public at the principal shows throughout the country, while English-bred birds which have been in keen competition at some of the Continental exhibitions have been most successful. I learn that the demand for birds as well as for " sittings " of eggs is a good and increasing one, and that the exports from English yards are most satisfactory. Not only is it a very charming breed from the fancy point of view, it can hold its own with some of the best as regards utility properties, the females being splendid egg-producers, close sitters, and careful mothers, and the cockerels making good table-fowls, resembling the Game in quantity and quality of flesh. For show purposes the Yokohama is improving in no small degree, and both in general type and in quantity of feather the birds of to-day are much superior to those exhibited in 1907. Concerning my note in last month's Record on the Rev. C. H. Hildebrand relinquishing Yokohamas, Mrs. L. C. Prideaux (of Lindfield, Sussex) informs me that the birds she purchased from Mr. Hildebrand were " thirty Duckwings, and not an imported bird, nor a white one among them." As is well known, Mrs. Prideaux does a considerable amount of winning with Yokohamas of her own strains, hence she did not purchase the birds to augment her stud, and is open to dispose of any of those she got from Mr. Hildebrand.

The Fancy in Scotland.

Signs are not wanting that the Fancy in Scotland is progressing. Already another Bantam club has been added to the list, and there is some talk about forming an Orpington club for the country. The former is the Scottish Variety Bantam Club, which had a good send-off in Glasgow towards the end of February. Mr. John McNaught is the president, while the secretary is Mr. George Mackenzie, of 5, Gibson-street, Kilmarnock. The fee is five shillings for new members and three shillings per annum thereafter. Membership is confined to fanciers residing in Scotland. The Orpington club has not caught on just yet; there seems to be a quibble about the subscription, some fanciers suggesting five shillings per annum, and others three. It is not the first attempt that has been made across the Border to get such a club going, but I hope that the present one will be successful.

ENGLAND'S PREMIER CO-OPERATIVE EGG SOCIETY.

By F. E. GREEN.

IT is rather an extraordinary thing that Suffolk, which is a county of low wages and poor cottage accommodation, should lead the way in two forms of co-operative enterprise. One takes the form of co-operative bacon curing; the tall shaft of the factory of which may be seen pointing skywards amidst fields of roots in the vicinity of Elmswell. £8,000 of the farmer's capital has gone into this building and its equipment, the doors of which will probably be flung open to an inrush of Suffolk pigs by the time these words are printed.

The other form of co-operation has nothing like this striking bacon factory to show to the world at large. On the contrary, it made its début in 1903 and was made in some obscure stable. Nevertheless, it has achieved great success, and it stands to-day as the largest egg-collecting and distributing depôt in all England. This is the Framlingham and District Agricultural Co-operative Society, Ltd., the chief business of which is the collection and marketing of eggs. I paid a visit to this Society when motoring through the county in February, and now the report presented at the annual meeting held on March 2 lies before me. From it we learn that the sales in 1904 amounted to £5,050, whilst the sales in 1911 amounted to no less than £23,981.

When I was in Framlingham the managing clerk courteously showed me the total amount in the books of the Society for the sale of eggs alone, and this amount came to £18,000; and of this £5,600 was received from one restaurant company. I do not think I should be betraying a trade secret if I mentioned the name of this company—the A. B. C.—for this statement will reassure those who enter an A. B. C. depot that the egg that they are decapitating for their lunch is of genuine British brand!

Like the Street Co-operative Egg Society, it was the start that was the difficult thing to accomplish. The local farmers laughed at Mr. E. G. Warren, the schoolmaster, and his colleagues. Now they feel aggrieved if the Society does not call at their farms to collect and market their eggs; and on the committee cheek by jowl sit a most noble Marquis and a Canon of the Church with farmers and cottagers. It is quite possible that they will in time erect a statue to Mr. Warren in Ipswich Market Place.

In 1904, 453,079 eggs were marketed by the Society. In 1911 only a few short of 4,000,000, the total weight of which amounted to 220 tons. We would like to pursue this further, and find out how many miles these eggs would stretch if laid end to end, but we have no time to work out this stupendous calculation.

One of the most satisfactory features of the Society is that the prices paid for eggs to members were higher in 1910 than in 1909, and higher still in 1911 than in 1910. Yet it seemed to me that the dairy companies, who are obtaining tested new-laid eggs from the Society, could afford to pay a higher price than that given for eggs on the occasion of my visit. I sell all my eggs to a Co-operative Distributive Store, which I noted was paying me a much higher price than that paid to the Framlingham Society by their London customers. However, the farmers' wives

CARTING CRATES OF EGGS IN A HAND TRUCK [*Copyright.*
At the Framlingham Co-Operative Egg Depot, where last year nearly 4,000,000 eggs were marketed

seemed very well pleased, if one may judge by the appearance of the fields as one drives into the Framlingham district, where nearly every field not sown with corn or beans seemed to bear, as it should, its quota of fowls, thus adding to the fertility of the farmer's soil and to the pin-money of the farmer's wife.

It appeared to me that the favourite breed kept was the Leghorn, and if the Society intends, as I believe it does, to take up the marketing of table birds, it is evident that a breed such as the Orpington, the Sussex, or the Faverolle, will have to supplant the scraggy, yellow-legged bird of unlimited freedom. To encourage a better breed of birds, the Society has made an excellent rule of paying a larger bonus to members who send in larger eggs. With Turkeys it has already begun to do business, for last Christmas 730 birds were dispatched at satisfactory prices. Easily beating the Street depot in the number of eggs it markets, I see no reason why the Framlingham Society should not emulate the Street Society in incubating, rearing, and fattening table birds.

The working expenses of the Society are not heavy, for by a rough calculation I have made, they appear to come to about 7 per cent. Surely any farmer would be glad enough of the opportunity to have one dozen eggs collected from his house and marketed for the cost of one egg. It should be borne in mind, too, that £300 of the profits is put to a reserve fund and to a balance carried forward.

I see no reason why the Framlingham Agricultural Co-operative Society, as well managed as it is, should not extend its sphere to every branch of agricultural co-operation. No doubt the Eastern Counties Farmers' Association supplies the members with feeding stuffs, fertilisers, &c., but there are many directions in which the Framlingham Society might carry on business. It has already acquired a coal and timber trade, and last autumn it purchased a travelling cider press, which began work last November. Over 2,400 gallons of cider were made, and more than one-third of the cost of the press was realised by the charge of 2d. per gallon.

CHICKEN CRAMP.

WITH the hatching season in full swing both broodies and brooders are now at a premium, while the chicks they shelter, or at least so many of them as will attain to maturity, are at present the most important department of the poultry-yard. For they embody no small share of the invested capital of the industry, and on their number, their growth, and fitness for whatever market ultimately claims them depends to a great extent the annual profit of poultry-keeping. Trade Returns and statistics tell us approximately at the close of each year the amount of profit derived from this great army of chickendom, but who is able to recount the losses by the way? How, for instance, can we more than dimly conjecture the immense number of chicks that die in the first week or two of their existence of ailments which might easily have been prevented or controlled?

When chickens are hatched by fifties or hundreds, a few fatalities in the first fortnight after their removal to the brooder are apt to excite little concern until the few become the many. Then a dilatory inquiry into the details of their management, aided, perhaps, by a post-mortem examination, reveals the fact that the mortality might well have been stayed from the outset. The experience so gained, however profitably it may serve on some similar future emergency, brings little immediate comfort to the disconsolate owner as he numbers the dead. It is reasonable to expect that the value of a chick will in due time attain to the value of a laying pullet or a table-cockerel; but if that estimate be excluded as being too optimistic, it must be granted that chick values are at least equal to those of the eggs from which they were hatched, plus the labour and expense of hatching and rearing. Even upon so low an appraisement, the amount of money dropped in the industry through preventable mortality among young stock must be very considerable every year.

There are many preventable diseases connected with the brooder stage of chicken-rearing, but it would be impossible in the space allotted to a single

A PEN OF MRS. TREVOR-WILLIAMS' WHITE WYANDOTTES.

article to treat of all or even the greater number of them. I shall therefore only attempt to describe a group of ailments as distinct from each other in the manner of their causation as they are in the character of their symptoms, to which collectively has by usage come to be assigned the common title of cramp.

The name is unfortunate and apt to be misleading, especially when treatment comes to be considered. For although cramp, or leg weakness, as it is sometimes called, is *the* prominent symptom in each of the ailments of the group, its recognition as such does not carry us further towards distinguishing which of several diseases calls for treatment. Without this knowledge, and it can only be arrived at after a full consideration of other signs taken in conjunction with the most noticeable one, all treatment directed against the malady will necessarily be only in the nature of guesswork, and but rarely happy in its effects.

The term "Chicken Cramp" is, however, so universally used throughout the poultry world that no advantage would be gained by substituting another for it, provided only that it is always remembered as representing a group and not a single disease. Forgetfulness, or want of knowledge of this fact, is responsible as each chicken season comes round for the number of complaints of intractable and fatal cramp, especially among brooder-reared chicks.

For convenience of description, and in order to emphasise more strongly the necessity of distinguishing between the different forms of cramp, I have classified them under five headings, as follows—viz. :

(1) Muscle cramp.
(2) Thermal cramp.
(3) Rheumatic cramp.
(4) Gouty cramp.
(5) Rickety cramp.

Such a classification will be found easy to keep in mind. There is no form of leg cramp met with in fowls from the time of hatching onwards which cannot be included in one or other of these five divisions, and it has the further advantage of suggesting the cause and to some extent the mode of prevention of each variety.

(1) Muscle Cramp.—All cramp is, of course, a form of painful muscular spasm, but I have limited to this class all cramp that depends for its origin upon some mechanically applied constriction or impediment to the muscles of locomotion. The earliest age at which this simple muscle spasm is observed is in the case of the newly-hatched chick immediately it has left the shell.

Lameness, disinclination to walk, and a tendency to squat on the floor are the signs met with. The cause is from a constrained position or sprain of the leg while within the shell. As long as the injury is merely muscular, and there has been no displacement of the bones, a few hours' rest, separation from the others, and gentle rubbing of the leg with any form of oil will effect a cure.

Another and a much more serious modification of muscle cramp is observed in brooder-reared chicks when the floor-covering is insufficiently soft and presents a hard, unyielding surface to the feet. Nothing wrong will be noticed for the first few days after the chicks have been transferred to the brooder. Then a number of them, and especially those that have been previously most active in running about, will become inclined to squat. If stirred from this position they easily raise themselves to the standing position, but immediately they try to walk they stumble, and the shanks seem to give way under them. If a chick is examined at this stage the muscles on the *front* part of the thighs and shanks will be found to be much wasted and thinner than those at the back.

The deformity progresses, the impact of the hard floor tends to flatten the claws and cramp the anterior leg muscles still more, the balance of muscular power becomes uneven, until at last the unaffected muscles assert their predominance and the claws become twisted laterally and flexed. The bird sinks back on its hocks, from which position nothing will tempt it except, perhaps, the sight of the food-trough, for the appetite in this variety of cramp never fails, and the general condition of the bird remains healthy. As to treatment, the indication is, of course, at once to provide a soft floor-covering of dry, fine earth or chaff laid down to the depth of 4in. or 5in., and if the material selected is earth, it must be frequently loosened with a rake to prevent caking. When this is done soon enough, the chicks quickly recover with no other treatment except daily rubbing of the wasted muscles, but if deformity has advanced to the stage of flexion of the claws, malformation is likely to be permanent.

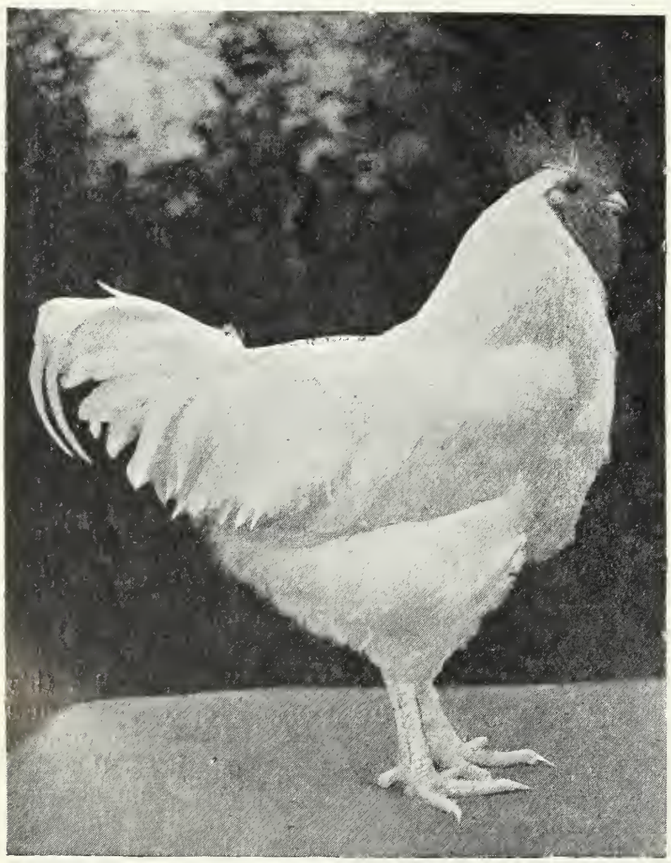
(2) Thermal Cramp.—This variety of cramp, like that just described, is frequently met with among chicks reared in brooders, but is by no means limited to them, for it often occurs in chickens of more mature age if they have been housed in too warm quarters or raised in a greenhouse. I have distinguished it by the name "thermal" cramp, since we can trace its cause to improper heat, especially when the heat comes from the floor and is thus applied to the feet of the birds. The ailment takes much the same course as regards lameness and deformity as muscle cramp from a hard floor, except that swelling and heat of the thighs is more evident than wasting of muscle. It is often, also, the result of neglecting to gradually reduce the temperature of the foster-mother week by week, or of keeping chickens too long in the brooder. The remedy for thermal cramp is to at once do away with the particular cause, keeping the floor of the sleeping-chamber cool, reducing the temperature of the brooder if that has been the fault, and if the chickens are old enough hardening them off and getting them into more open quarters as quickly as possible. In addition to the swollen legs, this cramp may be further distinguished by the fact that the victims are very thirsty, and while eager to drink quantities of water will eat very little.

(3) Rheumatic Cramp.—As its name implies this cramp arises from rheumatism contracted by exposure to rain or running in wet grass. It is therefore more common among older chickens or those that are cooped on grass. Brooder chicks escape on account of their more protected surroundings. The signs are limping and stiffness of the legs, with or without some swelling of joints, and often accompanied by stiffness of the neck and retraction of the head. The treatment

consists of placing the bird in a warm flannel-lined basket by the fire, rubbing the affected part with some stimulating liniment, such as sweet oil and turpentine, and internally administering from three to six grains of citrate of potash with one grain of camphor two or three times a day. Chickens with rheumatic cramp generally eat well, are not abnormally thirsty, and as long as they are kept at rest do not appear to suffer much.

The three varieties of cramp that we have so far been considering possess, in regard to their causation, a feature shared by all of them, in that the causal agent in all three is derived from *outside* the system. In muscle cramp it was traced to a mechanical interference with the natural play of the leg muscles; in thermal cramp to excessive heat improperly applied; while rheumatic cramp is generally associated with damp surroundings either of the atmosphere or of the fowl run. The two varieties of the ailment that remain to be described—viz., Gouty Cramp and Rickety Cramp—differ from the others in being caused neither mechanically nor by warmth or wet, but are brought about by chemical changes in the blood constituents, in each instance promoted by the administration of unsuitable food. To put it concisely, the cramp that arises from Gout or Rickets is but one of a number of symptoms occurring in two diseases which owe their origin to a faulty dietary. Here the mismanagement lies in the feeding; in thermal, rheumatic, and simple muscle cramp it lies in the housing.

(*To be continued in the May issue.*)



A WHITE ORPINGTON COCKEREL. [*Copyright.*

A 15-ACRE BALANCE-SHEET.

I HAVE just read Mr. J. S. Hicks's article "The Profits From a 15-Acre Poultry Farm." His figures I do not dispute, but as it is a balance-sheet for the specialist and not for the ordinary "small-holder" I attempt to give balance-sheets on a fifteen-acre holding; produce sold for consumption, at market prices; entry at Martinmas, at a rental of £15, and a capital of £200. My figures being based from my own results during the last ten or twelve years, from thirty hens kept for utility purposes on thirty poles, assuming that 300 hens will do as well spread over ten acres. But before going further let me say that I think the ideal size of a small-holding is fifty acres (unless for market gardening). A holding to this extent will keep a light pair of horses in work, and as the Government are encouraging breeding Army horses, a little might be made in breeding. As fifteen acres appear to be the popular size, I will now go on to picture one to this extent in our imagination.

I have settled on a nice piece of land, with buildings, southern exposure, and sheltered. The system to be ten acres in grass, four in hay, and one taken up with buildings, &c. Stock carried: 500 hens, ten ewes, cow, and pony. Hens to be kept two laying seasons, say 300 chickens reared each year, half cockerels and half pullets, the cockerels sold as soon as possible, also the two-year-old hens. Lambs to be taken of the ewes, say on an average twelve; there will also be a stirk for sale. The garden and dairy produce to be consumed in the house. And as a man has to have a house anyway, depreciation and interest on capital will square this. We now proceed in our venture.

PROBABLE BALANCE-SHEETS.

CAPITAL ACCOUNT.

Income.	£	s.	d.	Expenditure.	£	s.	d.
By Cash Capital in Bank	200	0	0	To Cash—1 Cow	13	0	0
				,, ,, 1 Pony	15	0	0
				,, ,, 10 Sheep	12	10	0
				,, ,, 50 Hens at 2/6	6	5	0
				,, ,, 4 Cocks at 5/-	1	0	0
				,, ,, 10 Portable Houses at £3	30	0	0
				,, Cash—Incubator and 2 Brooders	10	0	0
				,, Cash—Cart and Harness	20	0	0
				,, Cash—Sundries	20	0	0
				,, ,, Balance in hand	72	5	0
	£200	0	0		£200	0	0

CURRENT ACCOUNT, 1st YEAR.

Income.	£	s.	d.	Expenditure.	£	s	d.
By Cash on hand	72	5	0	To Cash—Feeding for 50 hens at $1\frac{5}{16}$d. per head, or 5/8 a year..	14	3	4
,, ,, 250 Cockerels sold.....	21	17	6	,, Cash—Feeding for 250 pullets for six months at 2/-	25	0	0
,, Cash—Eggs from 50 hens at 10/8 each hen, less £3 for hatching eggs	23	13	4	,, Cash—Feeding for 250 Cockerels at 1/- for three months....	12	10	0
,, Cash—12 Lambs at £1 5s.	15	0	0	,, Cash—Rent	15	0	0
				,, ,, Sundries	20	0	0
				,, ,, Household Expenses	35	0	0
				,, Cash—Balance in hand	11	2	6
	£132	15	10		£132	15	10

CURRENT ACCOUNT, 2ND YEAR.

Income.	£	s.	d.	Expenditure.	£	s.	d.
By Cash on hand, balance from 1st year's account	11	2	6	To Cash—Feeding for 300 hens at 5/8 per hen	85	0	0
,, Cash—Eggs from 300 hens at 10/8, less £2 10s. hatching eggs	157	10	0	,, Cash—Feeding for 150 pullets at 2/-	15	0	0
,, Cash—150 Cockerels at 1/9	13	2	6	,, Cash—Feeding for 150 cockerels at 1/-	7	10	0
,, Cash—150 Old Hens at 2/-	15	0	0	,, Cash—Rent	15	0	0
,, Cash—1 Stirk	7	10	0	,, ,, Sundries	25	0	0
,, Cash—14 Lambs	14	10	0	,, ,, Hand feeding for cows, &c.	5	0	0
				,, Cash—Household expenses	35	0	0
				,, Cash — Balance on hand	31	5	0
	£218	15	0		£218	15	0

By giving the above a little study, it will be seen that this will allow about equal to a man earning £1 5s. a week, which, of course, might be more. Let it be understood that I have not seen this in practice as a whole.

Would it not be of more value to the country if the Utility Poultry Club were to make a couple of trial plots for a year instead of the Laying Competitions, thus doing away with the expense of wire netting, which is the ruin of successful utility poultry farming?

MISS CAREY AND THE POULTRY CLUB.

To the Editor of THE ILLUSTRATED POULTRY RECORD.

SIR,—May I ask you to be kind enough to draw your readers' attention to a slight omission and inaccuracy of expression in the official report of the P.C. Council, published recently in your columns, which, I am told, conveys an entirely different impression to the one desired. The remark is as follows :

" The point was raised that Miss Carey's advertisement appearing in the Year Book and also in the Fancy Press being inaccurate," conveying the impression that my advertisements are attacked for a general tone of inaccuracy throughout all insertions in the Press.

The remark, according to the report sent to me, should read " being inaccurate regarding the class of special awarded to her winning cockerel at Haywards Heath, which took first and special for best White in show, it having just transpired that the special was probably a napkin ring and not a cup, and that the only other cup besides that which I won with my pullet being the breed cup, won by Mr. Cass's Buff pullet "; the error having crept in, no doubt, when taking over Mr. Bates' stud and list of wins, and mixing up the different specials won awarded at different shows.

How it came about that the point of discussion should have been omitted from the official report of the council, published in our leading poultry papers, rendering this statement against one of the club members both dangerous to trade and obscure is curious, but I feel certain that had the wider sense it conveyed been noticed, or attention paid to the fact (the error did not appear in any paper but that containing this list of wins), the statement would never have been allowed to go into print as it stands.

Yours truly,

S. CAREY.

DUCKS—TO SERVE HOT AND COLD.

A FRENCH METHOD.—Cut up a plump young bird into small neat joints and sprinkle these freely with flour well seasoned with salt, pepper, nutmeg, and grated lemon rind. Then, after rubbing the mixture well into the meat, fry the joints in a liberal supply of boiling clarified fat until just lightly browned. Take up the duck, carefully drain off the fat, and arrange the joints in a saucepan, then add a bunch of savoury herbs, two tablespoonfuls of finely-minced onion, a tablespoonful of good ketchup, and a teaspoonful of ground rice mixed smoothly with a little cold water; pour over the whole about half a pint of brown gravy or sauce, and a glass of port wine, then cover closely and stew gently for half an hour, when the meat will be sufficiently cooked. Have ready a hot dish upon which has been placed a ring of well-mashed and seasoned potatoes, and arrange the joints of duck in a neat pile in the centre, then remove the bunch of herbs, and pour the sauce over the duck, but not over the potato border. Garnish with sprigs of parsley and slices or quarters of fresh lemon, and serve very hot.

FILLETED DUCK.—Prepare in the usual way, and roast, without stuffing, two fine plump birds, and when done enough, cut the meat in long neat slices from the breasts; lay these in a stewpan with a glass of port and a small quantity of rich, creamy-brown sauce, and simmer gently for a quarter of an hour, after which dish up the fillets neatly on a firm border of mashed and seasoned potatoes, fill in the centre with a mound of green peas, French beans, or some other suitable green vegetable, spoon a little of the sauce over the fillets, so as to coat the outside of the potato border as well, pour the remainder round about, and serve at once.

A DAINTY FRICASSEE.—The following recipe affords an excellent opportunity for serving to advantage the remaining parts of a couple of good ducks, when the breasts have been used as in the foregoing recipe. Trim the joints neatly and press well into the flesh a good seasoning of salt, pepper, and fresh lemon juice, then cover them over in a cool place until required. Put into a stewpan an ounce of fresh butter, and fry in it until nicely browned, two large tablespoonfuls of finely-chopped onion, then add a bunch of savoury herbs, a tablespoonful of mushroom or walnut ketchup, three-quarters of a pint of good brown gravy, a glass of port, and a dessertspoonful of fine flour, mixed smoothly with a little water. Bring to the boil, stirring all the time, after which skim carefully, add the prepared joints, and simmer gently for twenty minutes. When ready, dish up in a neat pile on a layer of creamed cabbage, and pour the richly-flavoured sauce over all. Garnish round about with daintily-browned potato croquettes, and small, carefully-baked whole tomatoes arranged alternately, and send to table as quickly as possible.

TO SERVE COLD.—Prepare the birds in the usual way, truss them neatly, cook them carefully, and leave them to cool; then, when quite cold, mask them over entirely—after removing the fastenings, of course—with strong brown glaze, and when this is nearly set ornament the breasts with a tasteful arrangement of lean ham, tongue, boiled beetroot, pickled walnuts, and the whites of some hard-boiled eggs, all cut in

Julienne shreds, or stamped out in small fancy shapes. When required, place the birds on their dish, garnish round about with tiny heaps of roughly-chopped aspic, sprigs of fresh parsley, and slices of lemon, and serve accompanied by a well-mixed green salad, or, if preferred, by a French potato salad.

Another Method.—When the birds have been prepared, trussed, and carefully cooked, leave them until quite cold, then cut them up neatly into small joints and slices; season these pleasantly with the usual items, and afterwards coat them entirely over with liquid aspic. Repeat the coating two or three times if necessary until the meat presents a clear, bright appearance, being careful to let each coating set before adding the next. When quite firm, dish up the ducks in neat order on a flat dish, and garnish freely with fresh parsley or pleasantly-seasoned crisp watercress. Serve as an accompaniment some green peas, or French beans cut in lozenge shapes, which have been carefully cooked and allowed to get cold, and have then been well seasoned with fine salad oil, tarragon vinegar, salt, and freshly-ground pepper.

Duck Pie.—Prepare the birds in the usual way and partially cook them. Then cut them up neatly into small joints and slices, and arrange a layer of these at the bottom of a pie dish; sprinkle over them some very finely-chopped par-boiled onions, seasoned with salt, pepper, and powdered sage, and cover with a layer of thinly-sliced, good cooking apples. Repeat in this manner until the dish is sufficiently full, then moisten with a little stock or water, and cover with a crust of good short pastry. Ornament the top tastefully with the odds and ends of pastry, and make a small hole in the centre through which the steam may escape. Then brush over with beaten egg and bake in a brisk oven. When done enough, have ready some good gravy, sufficiently strong to form a jelly when cold, and pour this into the pie through the hole in the top. Serve cold, on a neatly-folded napkin, garnished with a border of parsley, or seasoned water-cress.

YEAR-BOOKS.

SINCE writing our notes for the March issue, we have received another budget of year-books from the specialist poultry clubs.

As usual, the one issued by the Partridge Wyandotte Club takes a place in the very front rank. In addition to the ordinary "cut and dried" matter that is inseparable from the issue of a year-book, there are some sound notes on the Club Show by Mr. F. W. Myhill. Practical advice on cockerel breeding is given by Mr. Richard Watson, while Mr. J. A. Boardley contributes a good article on pullet-breeding; and since both fanciers are noted breeders in their respective "lines," it can be imagined that these articles are invaluable to the novice. It is regrettable, seeing what a great amount of good the Partridge Wyandotte Club has done for the Fancy, that its finances have been reduced; and we are surprised to find that it is chiefly through the last two club shows, since, in spite of an extensive classification and numerous special prizes, they do not appear to have had the support from members that they should have done. However, the club has continued to do good work throughout the year, and has proved to be a "live" one, while we hear that it has in hand another novice competition of a specially interesting nature, and which it intends to launch during the coming season.

The Campine Club's Year-Book for 1912 is another publication in every way worthy of a prominent specialist club. Among its contents are some valuable articles, and other information that will appeal to those fanciers who are interested in the Campine fowl. "Campines in 1912" is the title of an excellent contribution from the pen of the president, the Rev. T. W. Sturges, and in it he deals fully with the utility as well as the exhibition aspects. The year-book also contains full reports of the English Campine Club Show at the Crystal Palace and the American Campine Club Show at New York, by the

A MAGNIFICENT RANGE OF POULTRY-HOUSES ON MR. HASSELBALCH'S FARM NEAR COPENHAGEN. [*Copyright*.

respective judges; while the popular hon. secretary, the Rev. E. Lewis Jones, has a couple of pages of notes about his visit to the United States and the formation of the American Campine Club. It is pleasing to hear that the breed, as well as the club, are in a very prosperous condition at present. And long may they remain so.

There is much in the White Wyandotte Club Year-Book for 1912 that makes a perusal of it of great interest not only to the numerous fanciers of the White—one of the very strongest varieties in the Fancy to-day—but to the ordinary "man-in-the-street" of poultrydom. So much so, as a matter of fact, that he would be a poor judge indeed who would award it other than "first and special"; in fact, the championship prize among specialist clubs' year-books. It is an excellent production, not alone from the artistic point of view, but as regards the mass of valuable information it contains. The novice is particularly well catered for, and in language that he can understand; while "the old hand" will be able to get a wrinkle or two from the book. Mr. W. M. Elkington's article on "Are Present Ideals Satisfactory?" is written in that journalist's well-known style; and that a great variation in type exists is forcibly shown in the half-tone illustrations—chiefly from direct photographs—that appear from pages 37 to 48 of the year-book. The popular secretary of the club, Mr. J. Stephen Hicks—himself "a literary gent" and a poet of no mean order—is at his best in the "Rubáiyát of the White 'Dotte"; and, from cover to cover, the year-book reflects the greatest credit on the club plus its editor.

The Variety Orpington Club has issued its year-book; but we must admit that there is not much in it that appeals to other than members of the club, and even for them nothing beyond the usual "dry as dust" items. It is, in fact, a sixteen-page pamphlet in a bright red cover, with an artistic front, containing a list of the officers, judges, and members; the rules, the annual report and balance-sheet, and the standards. From the statement of receipts and payments, we gather that the club is in funds, the cash in the hands of the treasurer being almost £32, while the actual balance is over £27. The club is by no means a young one—we notice that it is bashful about its age—so with something in hand we hope to see it coming into line with the other pushful specialist clubs this next year. It has the talent among its members.

As we go to press we hear of other year-books in preparation; and among them we may mention that of the Columbian Wyandotte Club, which, in the matter of annual publications, enters the lists for the first time this season. Then there is the enlarged issue of the Buff Orpington Club's Year-Book, which is now "in the press," and which, from all we can gather, promises to be the pick of those issued by the several Orpington Clubs. But more anon.

W. W. B.

The Y.M.C.A. and Poultry.

The Young Men's Christian Association of Camden, New Jersey, announce a course in Poultry Husbandry among its various branches of instruction. This is supported by the State College of Agriculture.

INTERNATIONAL ASSOCIATION OF POULTRY INSTRUCTORS.

THE growth of the poultry industry in nearly every country of the world during recent years has been phenomenal. From being, with a few exceptions, a by-product of the farm, of small value, and regarded with indifference or totally neglected, the various races of poultry have proved a source of profit to agriculturists of all grades and to many others, who have found an ever-increasing demand for eggs and poultry, the prices of which have advanced very largely. An estimate has been made that the annual value of the world's poultry crop exceeds £250,000,000, and is rapidly advancing.

As a result of these developments, though they are to a greater extent than is commonly supposed due to educational and experimental work, there has been of late years a considerable amount of attention given by various Ministries of Agriculture, colleges, and experiment stations in different countries to the teaching of and experimental work in connection with poultry-keeping. The problems which necessarily follow increase, and intensification of production is commanding the services of trained instructors and investigators, and the work which is being done is of great value. That this will rapidly advance is unquestionable.

Such developments have been most marked in Canada and the United States of America. Four years ago the poultry instructors and investigators of those countries formed an association for mutual co-operation and interchange of observations and experience. The last meeting was held at Orono, Maine, in August, 1911, at which a resolution was adopted in favour of an association embracing such workers in all the countries of the world, the number of which is already considerable. It was felt that by focussing the knowledge and experience of all the power of each would be greatly enhanced.

As a result of this action a Provisional Committee has been formed, consisting of representatives of the following countries:

Australia.—Mr. H. W. Potts, Principal Hawkesbury Agricultural College, New South Wales; Mr. F. W. L. Anderson, Brisbane, Queensland; Mr. D. F. Laurie, Department of Agriculture, South Australia; Mr. R. J. Terry, Agricultural Department, Hobart.

Belgium.—Mons. A. Van Gelder, Uccle, Brussels.

Canada.—Prof. W. R. Graham, Ontario Agricultural College, Guelph.

Denmark.—Mr. W. A. Kock, Copenhagen.

England.—Prof. F. V. Theobald, S.E. Agricultural College, Wye; Mr. C. E. J. Walkey, Somerset County Council.

Germany.—Professor Beeck, Crollwitz, Halle-am-Salle.

Germany.—Prof. Dr. Henreich Poll, University of Berlin, Hindersinstrasse 3, Berlin, N.W.; Director Karl Haas, Bavarian Breeding Station, Erlangen, near Nuremburg.

Holland.—Mr. H. B. Beaufort, Harlem.

TABLE OF PRICES REALISED FOR HOME, COLONIAL, AND FOREIGN POULTRY, GAME, AND EGGS FOR THE FOUR WEEKS ENDING MARCH 16, 1912.

ENGLISH POULTRY—LONDON MARKETS.

Description.	1st Week.	2nd Week.	3rd Week.	4th Week.
	Each.	Each.	Each.	Each.
Surrey Chickens	3/3 to 5/6	3/6 to 5/0	3/0 to 5/0	3/3 to 5/0
Sussex ,,	3/3 ,, 5/6	3/6 ,, 5/0	3/0 ,, 5/0	3/3 ,, 5/0
Yorkshire ,,	2/6 ,, 4/0	2/9 ,, 4/0	2/9 ,, 4/0	2/9 ,, 4/0
Boston ,,	2/6 ,, 4/0	2/9 ,, 4/0	2/9 ,, 4/0	2/9 ,, 4/0
Essex ,,	2/6 ,, 4/0	2/9 ,, 4/0	2/9 ,, 4/0	2/9 ,, 4/0
Capons	5/6 ,, 7/6	5/6 ,, 7/6	5/6 ,, 7/6	5/6 ,, 7/6
Irish Chickens	2/6 ,, 3/6	2/3 ,, 3/6	2/3 ,, 3/6	2/3 ,, 3/6
Live Hens	2/3 ,, 3/0	2/3 ,, 3/0	2/3 ,, 3/0	2/3 ,, 3/3
Aylesbury Ducklings	— —	— —	— —	4/6 ,, 6/6
Ducks	4/0 ,, 6/6	4/0 ,, 6/6	4/0 ,, 6/6	4/0 ,, 6/0
Geese	6/0 ,, 7/0	— —	— —	— —
Turkeys, Cocks ...lb.	0/8 ,,0/11	0/8 ,,0/11	0/8 ,,0/11	0/8 ,,0/11
,, Hens ...lb.	0/9 ,,0/11	0/8 ,,0/11	0/8 ,,0/11	0/8 ,,0/11

ENGLISH GAME—LONDON MARKETS.

Description.	Each.	Each.	Each.	Each.
Grouse	— —	— —	— —	— —
Partridges	— —	— —	— —	— —
Pheasants	— —	— —	— —	— —
Black Game	— —	— —	— —	— —
Hares	2/0 to 2/9	— —	— —	— —
Rabbits, Tame	1/3 ,, 2/9	1/3 to 2/6	1/3 to 2/6	1/6 to 2/6
,, Wild	0/6 ,, 1/0	0/6 ,,0/11	0/6 ,, 1/0	0/6 ,, 1/0
Pigeons, Tame	— —	— —	— —	— —
,, Wild	— —	— —	— —	— —
Wild Duck	1/3 ,, 1/9	1/6 ,, 1/9	2/0 ,, 2/6	2/0 ,, 2/6
Woodcock	— —	— —	— —	— —
Wazels	1/0 ,, 1/2	— —	— —	— —
Guinea Fowls	2/6 ,, 3/0	2/6 ,, 3/0	2/6 ,, 3/0	2/6 ,, 3/0

ENGLISH EGGS (Guaranteed New-Laid).

Markets.	Per 120.	Per 120.	Per 120.	Per 120.
LONDON	14/- to 16/-	14/- to 15/-	9/- to 10/6	8/- to 9/-
Provinces.	Eggs per dozen.	Eggs per dozen.	Eggs per dozen.	Eggs per dozen.
CARLISLE	1/5	1/3	1/3	1/0
BRISTOL	1/6	1/6	1/4	1/2

FOREIGN POULTRY—LONDON MARKETS.

Countries of Origin.	Prices Realised during the Month.									
	Chickens. Each.		Ducks. Each.		Ducklings. Each.		Geese. Per lb.		Turkeys. Per lb.	
Russia	1/6 to 2/9		2/6 to 3/0		—	—	—	—	—	—
Belgium	—	—	—	—	—	—	—	—	—	—
France	—	—	—	—	—	—	—	—	—	—
United States of America	—	—	—	—	—	—	—	—	—	—
Austria	—	—	—	—	—	—	—	—	—	—
Canada	—	—	—	—	—	—	—	—	—	—
Australia	—	—	—	—	—	—	—	—	—	—

FOREIGN GAME. LONDON MARKETS.

	Price Each During Month.
Capercailzie	— —
Black Game	1/4 to 1/8
Ptarmigan	1/0 ,, 1/2
Partridges	1/6 ,, 1/9
Quail	— —
Bordeaux Pigeons	1/0 ,, 1/9
Hares	1/6 ,, 2/6
Rabbits	0/8 ,, 0/9
Snipe	— —

IMPORTS OF POULTRY AND GAME. MONTH ENDING FEB. 29, 1912.

Countries of Origin.	Declared Values.	
	Game.	Poultry.
Russia	£4,699	£69,786
France	£2	£5,109
Austria-Hungary	£122	£8,249
United States of America	—	£19,896
Other Countries	£7,068	£7,694
Totals	£11,891	£110,734

IRISH EGGS.

Description.	1st Week.	2nd Week.	3rd Week.	4th Week.
	Per 120.	Per 120.	Per 120.	Per 120.
Irish Eggs	13/6 to 14/9	13/6 to 14/6	9/0 to 10/6	8/3 to 9/6

FOREIGN EGGS.

Description.	1st Week.	2nd Week.	3rd Week.	4th Week.
	Per 120.	Per 120.	Per 120.	Per 120.
French	14/0 to 15/0	14/0 to 15/0	9/0 to 10/6	8/3 to 9/6
Danish	14/0 ,, 15/0	13/6 ,, 15/0	9/0 ,, 10/6	8/3 ,, 9/6
Italian	13/6 ,, 14/6	13/6 ,, 14/0	8/6 ,, 10/0	8/3 ,, 9/0
Austrian	11/0 ,, 13/0	11/6 ,, 13/0	7/6 ,, 9/0	7/3 ,, 8/3
Russian	10/0 ,, 11/0	11/0 ,, 12/0	— —	— —

IMPORTS OF EGGS. MONTH ENDING FEB. 29, 1912.

Countries of Origin.	Quantities in Gt. Hund.	Declared Values.
Russia	42,588	£19,505
Denmark	82,688	£53,958
Germany	18,232	£8,001
Netherlands	31,829	£16,985
France	51,440	£25,708
Italy	87,420	£50,831
Austria-Hungary	81,345	£41,757
Other Countries	417,659	£160,344
Totals	£813,201	£377,089

India.—Mr. A. C. Dobbs, B.A., Agricultural Department, Pusa, Bengal.

Italy.—Signor Alfredo Vitale, Salvator Rosa, 67, Naples.

New Zealand.—Mr. F. Brown, Department of Agriculture, Wellington.

Norway.—Lieut.-Colonel Thame, Christiania.

Scotland.—Mr. Wil Brown, West of Scotland Agricultural College, Kilmarnock.

South Africa.—Prof. T. E. Durden, Rhodes University College, Grahamstown, Cape Colony.

United States of America.—Prof. Leon J. Cole, Madison, Wis.; Prof. F. E. Elford (President American Association), Buffalo, N.Y.; Prof. J. E. Rice, Cornell University, Ithaca, N.Y.

Wales.—Mr. W. Hopkins-Jones, University of North Wales, Bangor.

Others will be added in due course.

By postal vote the members of the Provisional Committee have elected Mr. Edward Brown, F.L.S., of London, hon. sec. of the National Poultry Organisation Society, as the first President of the International Association; and Dr. Raymond Pearl, Chief Biologist, Agricultural Experiment Station, Orono, Maine, U.S.A., is acting as honorary secretary *pro tem.*

Arrangements are being made for holding the first meetings of the Provisional Committee in London, July 18th to 24th, 1912, at which it is anticipated that a most representative International gathering of poultry teachers and investigators will be assembled. These meetings will be held in the Council Room of the Royal Agricultural Society of England, 16, Bedford Square, London, W., by courtesy of the Council.

THE PROPOSED TABLE POULTRY CLUB.

Sir,—The meeting of the Provisional Committee was held at Room 109, Temple Chambers, on Wednesday, February 28, at 2.30 p.m., when it was decided that the following proposals be submitted to the Utility Poultry Club.

The Utility Poultry Club is now considering these proposals, and in the meantime I shall be glad to hear of any persons who will be willing to join the club in the event of these proposals being carried out.

Thanking you for your kind assistance in this matter—I am, Sir, yours faithfully,

(Signed) W. Henfrey.

The Dower House, Langley Park,
Beckenham.

1. That the Utility Poultry Club shall be asked to form a separate sub-committee of not less than six men who are experts in the table branch of poultry production, with a separate secretary, who shall, subject to the approval of the committee of the Utility Poultry Club, have full management of the Table Poultry Branch.

2. That this committee shall draw up a scheme of policy to be approved by the Utility Poultry Club before commencing operations, and be hampered as little as possible.

That the aims of this branch shall be:

3. To consider the question of growing and fattening tests.

4. To do everything possible to arrange better classification for table poultry at shows by

(a) Revising the standard for dead poultry.
(b) By appointing specialist judges who will judge by the standard.
(c) By guaranteeing classes and offering good specials.
(d) By trying to arrange special classification for (i.) professional fatteners, (ii.) smallholders, cottagers, tenant farmers, &c., (iii.) classes for machine-fed birds, (iv.) classes for birds fed other than by machine, (v.) classes of birds not to exceed a given weight.

5. By arranging if possible lectures and demonstrations at large shows, also the distribution of literature, and by prize essays.

6. To arrange at as early a date as possible a conference and exhibition of appliances, birds (live and dead), foods, &c.

7. To obtain better railway conditions and facilities and cheapen the carriage on live and dead poultry.

8. To endeavour to obtain recognition of British poultry and the marking of foreign poultry as compared with home-grown produce.

(Signed) W. Henfrey, Hon. Secretary.

A BELGIAN PLYMOUTH ROCK COCK.
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ANSWERS TO CORRESPONDENTS.

M. G. (Purley).—About 720.
E. A. B. (Salford).—75 to 80.
F. J. N. R. (Bracknell).—1894.
R. S. P. (Bolton).—Liver disease.
P. S. M. G. (Northallerton).—Yes.
T. W. S. (Maud).—Aylesbury ducklings.
W. S. (Kirkwall).—The artificial method.
E. M. T. R. (Cork).—The Buff Orpington.
W. C. B. (Aysgarth).—The Plymouth Rock.
S. R. G. T. (Earley).—The first week in October.
P. C. (Rotherham).—We cannot entertain your offer.
G. T. S. (Matlock).—See article in this month's issue.
H. M. R. (Leith).—1. From 19 to 21 days. 2. 30 days.
M. T. (Sudbury).—1. Yes. 2. Yes. 3. We do not know.
F. W. S. (Newark).—Consult our advertisement pages.
H. W. T. (Woodbridge).—We cannot help you in the matter.
R. W. (Great Hadham).—See issue of I.P.R. dated May, 1909.
Curious (Potter's Bar).—The details you give are much too meagre.
B. C. D. (Perth).—The delay was due to your writing "private" on the envelope.
W. N. (Chippenham).—You have been misinformed, for there is no breed of that name.
Enquirer (Ballinglana).—We cannot understand your question. Please write more fully.
T. E. M. (Maldon).—1. Peat moss-litter. 2. Straw rather than chaff. 3. Broken oyster-shell.

THE PRESERVATION OF EGGS.

THE keeping in good condition of eggs is a problem of the utmost importance from both the economic and hygienic point of view. Eggs are a high-class food consumed to an enormous extent. In France the average consumption is 500,000,000 kilogrammes of eggs per year, 300,000,000 of which are produced in France and 200,000,000 imported.

The production of eggs is not uniform throughout the year; therefore, preserving in some way is an absolute necessity; from this, however, very serious miscalculations and disagreeable surprises sometimes result. Preserved eggs have been accused of being the cause of more or less grave cases of poisoning.

Dr. Miramond de la Roquette has just read at the Congress in Dijon a remarkable paper in which he examines the different causes of deterioration of eggs. Starting from this question, he enters upon a critical study of the methods of preserving. The essential points of this study are the following:

Generally, when an egg grows stale under normal conditions, the essential change is dehydration which is manifested by an average loss of weight in the open air of 10 to 15 centigrammes per day. This loss of weight varies with the thickness of the shell and the outside conditions of temperature and moisture. This progressive drying is the prime cause of the change in taste and other alterations of the egg. An egg which has lost by evaporation one-tenth of its weight, can no longer be eaten soft-boiled; after losing one-fifth it is really bad and unfit for use. This growing stale is attended by chemical alterations which are still far from well understood.

Alterations of the egg by putrefaction or mouldiness are relatively rare, 7 to 8 per cent. only. They are in most cases due to germs which have made their way through the shell and first settled on the membranes. When laid, the inside of the egg is practically aseptic.

To preserve eggs, therefore, the following must be the objects aimed at: avoiding contact with the air and contamination, preventing evaporation and eliminating external causes of infection.

Preservation in lime water is in France the method widely used in industry and in households; on the whole this method seems to be the most satisfactory. A good solution is made by 8 to 10 per cent. of quicklime, or 20 per cent. of slacked lime. This liquid is an energetic antiseptic, without being poisonous; it hardly penetrates the substance of the egg at all, and imparts no injurious property. The egg retains its complete weight and the greater part of its natural properties for a considerable period, ten months at least.

Of course the eggs must be subjected to the treatment when very fresh; they must be entirely immersed and kept in a cold place away from the light.—*Bulletin of Agricultural Intelligence.*